

Datasheet Secure Routers



Weidmüller's new routers give users the ability to communicate with machinery and systems with total peace of mind from anywhere in the world!

These units are optimized for use in Industrial automation and networking applications. This also allows users to benefit from vertical data integration from the production level, over the office network, through to the Internet.

They offer the ultimate in performance with Gigabit technology on both Ethernet ports (LAN/WAN) to harness the benefits of standard Ethernet communication and industrial automation technology.

Key Features:

- Cellular and Non-cellular options
 - 10/100/1000 LAN/WAN Ports only
 - 10/100/1000 LAN + integrated UMTS/3G modem
- Configurable as a 2 port switch with Layer 2 Bridge or Full IP-Router
- Encrypted VPN for secure direct access to LANs worldwide
- On-board Digital I/O for manual cut-off and control of information flow
- Built-in Firewalls to prevent unauthorized access to networks
- Multicarrier Protocols: GPRS/EDGE, UMTS/HSPA; EVDO Rev0/A, 1xRTT
- Over-The-Air Network Diagnostics and Configuration
- USB Configuration and Firmware Programming



Weidmüller, Canada
10 Spy Court
Markham, Ontario L3R 5H6
Telephone: (800) 268-4080
Facsimile: (877) 300-5635
Email: info1@weidmuller.ca
Website: www.weidmuller.ca

Weidmüller, Mexico
Bvd. Hermanos Serdán 698,
Col. San Rafael Oriente
Puebla, Puebla, Mexico
C.P. 72029
Telephone: 01 222 2686267
Facsimile: 01 222 2686219
Email: clientes@weidmuller.com.mx
Website: www.weidmuller.com.mx

Weidmüller, United States
821 Southlake Blvd.
Richmond, Virginia 23236
Telephone: (800) 849-9343
Facsimile: (804) 379-2593
Email: info@weidmuller.com
Website: www.weidmuller.com

Gigabit Industrial Security Router

- 2 Gigabit ports (LAN/WAN)
- Integrated firewall
- NAT masquerading, 1:1 network mapping and port forwarding
- Remote access via VPN (OpenVPN, IPsec, L2TP)
- Key switch function for activation/deactivation of WAN/VPN connection
- Variant with integrated 3G/UMTS modem for rapid, Internet-based wireless access
- Back-up and recovery of device configuration using SIM card
- Full Layer 2/3 Router



Technical data

Modes	
IP-Router	Static or dynamic routing, supporting RIPv2 / OSPF
Transparent Bridge	2-port switch with additional layer-2 filter
Network Services	
	<ul style="list-style-type: none"> • DHCP server / DHCP relay • DNS relay • NTP client • DynDNS (DHCP client by RFC 2136)
Firewall	
	<ul style="list-style-type: none"> • IPv4 Stateful inspection Firewall (incoming/outgoing) • NAT-Masquerading, 1:1 NAT, Portforwarding • Layer-2/3-Filter (VLAN ID, VLAN, QoS tag, MAC address, Ethertype frame) • "Auto learning" feature to create packet filter rules (analysis of network traffic) • Layer 2/3-based packet prioritization (Ethernet frame, IP header, VLAN tag)
VPN	
OpenVPN	<ul style="list-style-type: none"> • Configurable as OpenVPN server or client (Layer 2 and Layer 3) • Authentication with X.509 Certificates • Tunnel support via HTTP proxy • Maximum of 10 different client or server configurations • Unlimited number of client connections in server mode
IPsec	<ul style="list-style-type: none"> • Can be configured as an IPsec server or client • PSK authentication (user ID, password) or X.509 certificates • Hardware-based encryption for faster data throughput • A maximum of 64 simultaneous connections (subnet to subnet or as an IPsec server) • Encryption algorithms DES-56, 3DES-168, AES 128, AES 192, AES-256
Management	
	<ul style="list-style-type: none"> • Configuration via WEB interface (HTTP / HTTPS) • Web interface in German or English • Configuration support through detailed help information (tooltip) • Configurable multi-user access with definable rights mask • Support of SNMP v1/v2/v3, event log / syslog
Other	
Modbus/TCP	Integrated Modbus TCP Server for status queries, and software-based activation / de-activation of VPN connections
Diagnosis	"Remote Capture" feature for network diagnostics via a connected PC (Wireshark)
Monitoring	Client Monitoring (via ICMP) with alarm function in case of error
Interfaces	
RJ45 ports	2x10/100/1000BaseT(X)
USB port	Option for future expansion
SCM card reader	Save and restore of the configuration using a smart card (memory chip)
LED indicators	Signaling states for power, status, cut, alert, active VPN connection and an active UMTS connection
Digital outputs	<ul style="list-style-type: none"> • "Alarm" → Indicates a configurable network status or error (24 V out) • "VPN-active" → Indicates an active VPN connection (24 V out)

Interfaces (continued)	
Digital inputs	<ul style="list-style-type: none"> • "Cut" → Disconnects physically (link down) the WAN port (24 V) • "VPN-initiate" → Enables a pre-configured VPN connection (24 V)
Reset button	Restoring the factory default
Power requirements	
Input Voltage	1x 24 V DC (7 to 36 volts)
Current consumption	max. 600 mA @ 24 V DC
Technical data (housing)	
Housing	Metal, IP 30 protection
Dimensions (W x H x D)	35 x 159 x 134 mm (without antenna) 35 x 255 x 134 mm (with UMTS antenna)
Installation	TS 35
Environmental Limits	
Operating temperature	-20 °C to +70 °C
Storage Temperature	-20 °C to +85 °C
Ambient humidity	6 to 90 % not condensing
DSL and UMTS/HSPA	
DSL	Connection to the DSL modem via LAN or WAN port Free configuration of the PPPoE login
DynDNS	Support automatic registration
UMTS/3G	<ul style="list-style-type: none"> • Built-in quad-band UMTS / HSPA modem (only variant IE-SR-2GT-UMTS/3G) • 7.2 Mbps peak downlink, uplink 5.8 Mbps peak • WCDMA 850/1900/2100 MHz GSM/GPRS/EDGE 850/900/1800/1900 MHz • FCC, IC, CE, GCF, PTCRB, A-Tick, AT&T, Telstra, NTT, DoCoMo, Softbank, Bell
Approvals	
Security	cULus Listed
EMC	FCC Part 15 Class A, EN 55022 Class A, EN61000-4-2 (ESD), EN61000-4-3 (RS) EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS)
Shock	DIN EN 60068-2-27
Vibration	DIN EN 60068-2-6
Warranty	
Warranty Period	3 years

Ordering data

Models	Type	Part No.
LAN/WAN router	IE-SR-2GT-LAN	1345270000
LAN/WAN router with integrated UMTS/3G modem	IE-SR-2GT-UMTS/3G	1345250000

Gigabit Industrial Security Router

- 2 Gigabit ports (LAN/WAN)
- Integrated firewall
- NAT masquerading, 1:1 network mapping and port forwarding
- Key switch function for activation/deactivation of WAN/VPN connection
- Back-up and recovery of device configuration using SIM card
- Full Layer 2/3 Router



Technical data

Modes	
IP-Router	Static or dynamic routing, supporting RIPv2 / OSPF
Transparent Bridge	2-port switch with additional layer-2 filter
Network Services	
	<ul style="list-style-type: none"> • DHCP server / DHCP relay • DNS relay • NTP client • DynDNS (DHCP client by RFC 2136)
Firewall	
	<ul style="list-style-type: none"> • IPv4 Stateful inspection Firewall (incoming/outgoing) • NAT-Masquerading, 1:1 NAT, Portforwarding • Layer-2/3-Filter (VLAN ID, VLAN, QoS tag, MAC address, Ethertype frame) • "Auto learning" feature to create packet filter rules (analysis of network traffic) • Layer 2/3-based packet prioritization (Ethernet frame, IP header, VLAN tag)
Management	
	<ul style="list-style-type: none"> • Configuration via WEB interface (HTTP / HTTPS) • Web interface in German or English • Configuration support through detailed help information (tooltip) • Configurable multi-user access with definable rights mask • Support of SNMP v1/v2/v3, event log / syslog
Other	
Modbus/TCP	Integrated Modbus TCP Server for status queries
Diagnosis	"Remote Capture" feature for network diagnostics via a connected PC (Wireshark)
Monitoring	Client Monitoring (via ICMP) with alarm function in case of error
Interfaces	
RJ45 ports	2x10/100/1000BaseT(X)
USB port	Option for future expansion
SCM card reader	Save and restore of the configuration using a smart card (memory chip)
LED indicators	Signaling states for power, status, cut, alert, active VPN connection and an active UMTS connection
Digital outputs	"Alarm" → Indicates a configurable network status or error (24 V out)
Digital inputs	"Cut" → Disconnects physically (link down) the WAN port (24 V)
Reset button	Restoring the factory default

Power requirements	
Input Voltage	1x 24 V DC (7 to 36 volts)
Current consumption	max. 600 mA @ 24 V DC
Technical data (housing)	
Housing	Metal, IP 30 protection
Dimensions (W x H x D)	35 x 159 x 134 mm (without antenna) 35 x 255 x 134 mm (with UMTS antenna)
Installation	TS 35
Physical Dimensions	
Housing	Metal, IP 30 protection
Dimensions (WxHxD)	35 x 159 x 134 mm
Installation	TS 35
Environmental Limits	
Operating Temperature	-20 °C to +70 °C
Storage Temperature	-20 °C to +85 °C
Ambient Humidity	6 to 90 % not condensing
DSL	Connection to the DSL modem via LAN or WAN port Free configuration of the PPPoE login
DynDNS	Support automatic registration
Approvals	
Security	cULus Listed
EMC	FCC Part 15 Class A, EN 55022 Class A, EN61000-4-2 (ESD), EN61000-4-3 (RS) EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS)
Shock	DiN EN 60068-2-27
Vibration	DiN EN 60068-2-6
Warranty	
Warranty Period	3 years
MTBF	135,270 hrs

Ordering data

Models	Type	Part No.
LAN/WAN router (Firewall & NAT Only)	IE-SR-2GT-FN	1489940000

Multi-Service Provider Cellular Modem and Router

The 615M-1 is a powerful Multi-Service Provider Cellular Broadband Router that delivers wireless data connectivity for up to two LAN connections and one serial port through public cellular networks at 3G network speeds.

- High Speeds - Speeds up to 14.4Mbps with backward compatibility
- Multicarrier Compatibility and Carrier Redundancy - GPRS/EDGE, UMTS/HSPA; EVDO Rev0/A, 1xRTT
- VPN Functionality - Internal PPTP VPN Server and Client
- Supports Industrial Networking Protocols
- Meets Key Certifications and Compliance - UL Listed, Class I Division 2, FCC Part 15, Industry Canada, CE, A-Tick, IEC 60950-1, PTCRB
- Carrier Specific Approvals: AT&T, Verizon, Sprint, Rogers, Telstra, Optus, Vodaphone
- DIN-rail mount or panel mount, Simple and fast installation



Technical data

Transceiver/Receiver	
Frequency	Quad-band 850/900/1900/2100MHz/AWS(1,2)
	Quad-band 850/900/1800/1900MHz(3,4)
	800MHz Cellular/1900MHz PCS/2100MHz(5)
	800MHz Cellular/1900MHz PCS/2100MHz(6)
	800MHz Cellular/1900MHz PCS(7)
Transmit Power (Max)	250mW(1,2); 2W(3,4); 250mW(5,6,7)
Transmission	UMTS, HSPA, EDGE, GPRS, EVDO Rev A (IS-856-A), 1xEVDO Rev 0 (IS-856), 1xRTT (IS-2000)
Modulation	UMTS, HSPA, EDGE, GPRS, EVDO Rev A (IS-856-A), 1xEVDO Rev 0 (IS-856), 1xRTT (IS-2000)
Receive Sensitivity	-109dBm(1); -109dBm(2); -105dBm(3,4); -107dBm(5,6,7)
Channel Spacing	5MHz(1,2); 10MHz(2); 1.25MHz(5,6,7)
Data Rate	Downlink up to 384kbps; Uplink up to 384kbps(1)
	Downlink up to 14.4Mbps; Uplink up to 5.76Mbps(2)
	Downlink up to 236kbps; Uplink up to 236kbps(3)
	Downlink up to 115kbps; Uplink up to 115kbps(4)
	Downlink up to 3.1Mbps; Uplink up to 1.8Mbps(5)
	Downlink up to 2.4Mbps; Uplink up to 153.6kbps(6)
Range (LoS)	Downlink up to 153.6kbps; Uplink up to 153.6kbps(7)
	Cellular Depends on Service Provider
Antenna Connector	2 x Female SMA Standard Polarity(1,2,3,4,5,6,7)
Input/Output	
Discrete Input	ON 2.3Vdc, OFF 0.7Vdc, 5.5Vdc max(8)
Discrete Output	NPN Transistor Close to Digital Ground, Pull Down 100ohm(8)
Relay Outputs	Max Voltage 30Vdc, Max Current 1A(8)
Analog Inputs	Voltage Input Range 0 – 30Vdc, Accuracy +/-0.2Vdc(8)
Interfaces	
Ethernet Port	10/100baseT; RJ45 Connector – 2 x IEEE 802.3 (Auto MDIX)
Link Activity	Activity LED
Serial Port RS232	DB9 Female DCE
Data Rate (Bps)	1200, 2400, 4800, 9600, 14400, 19200, 38400, 57600, 76800, 115200
Serial Settings	8 Data Bits; No Stop/1 Start/Parity (Configurable)
Protocols & Configuration	
Protocols Supported	TCP/IP, UDP, ARP, ICMP, FTP, TFTP, TELNET, PING, GPS-NMEA (optional), DHCP; MAC Filtering (Whitelist), IP Filtering (Blacklist), DMZ, Dynamic RADIUS/802.1x DNS, Port Forwarding; SNMP, HTTP Embedded Web Server; IPsec, GRE Tunneling, PPTP, VPN,

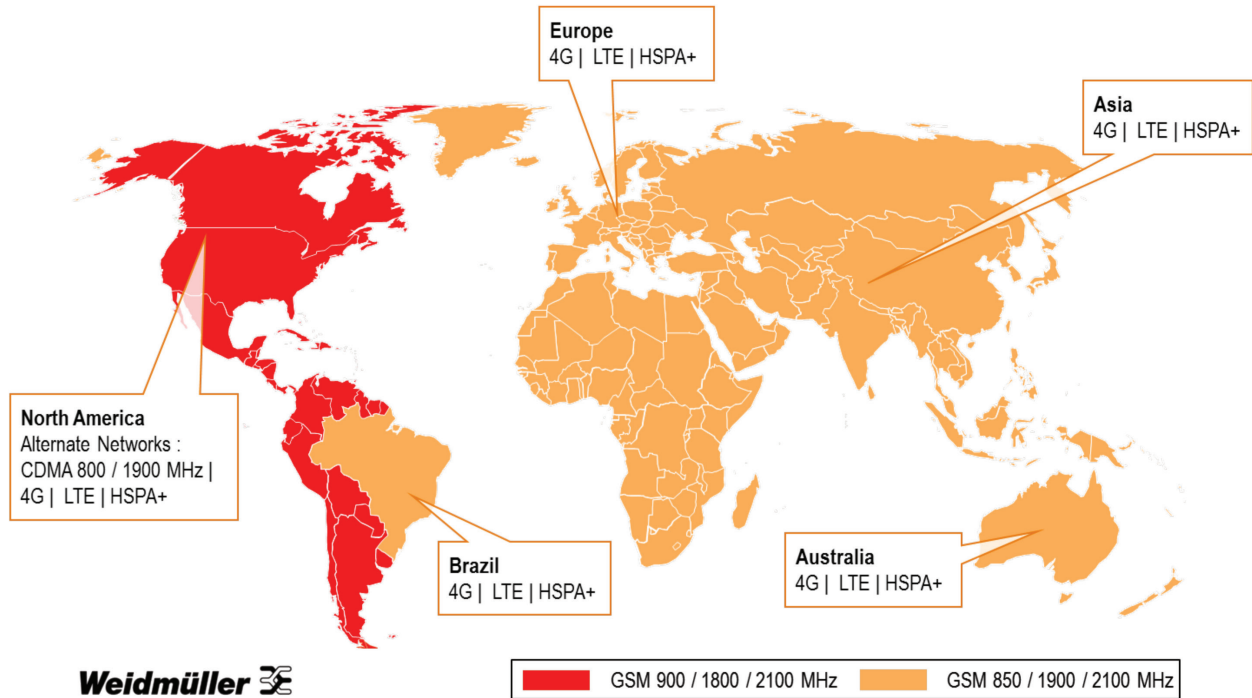
Protocols & Configuration (continued)	
User Configuration	Configuration and Firmware Upgrades via HTTP/OTA (Over-The-Air)
Configurable	Client/Router, Serial Client Server
Parameters	Simultaneous RS232 Connection
Security	VPN, SIM Card PIN, RADIUS, IPsec
Bandwidth	MAC Address – Whitelist/Blacklist, IP Filtering – Protection Whitelist/Blacklist Network Management SNMP V2c, V3
Approvals	
EMC	FCC Part 15; Industry Canada; CE; A-Tick
RF (Radio)	EN 300 328; FCC Part 15
Hazardous Area	Class I, Division 2; UL; cULus
Safety	IEC 60950-1
UL	cULus Listed
Environmental	MIL-STD-810F
Approvals	PTCRB, Carrier Specific Approvals
General	
Dimensions	109 x 153 x 45mm (4.3" x 6" x 1.8")
Housing	Powder-coated Aluminum
Mounting	DIN Rail, Panel Mount (Optional)
Terminal Blocks	I/O: Removable Terminal Block, Screwless-Push in Wire, 18 - 28AWG
Temperature Rating	-30 to +70°C; -22 to +158°F
Humidity Rating	5 – 95% RH Non-condensing
Weight	1.13kg (2.5lb)
LED Indication	RSSI; SVC; NET; GPS; AUX
Reported Diagnostics	Diagnostics Available Through Web Pages
Power Supply	
Nominal Supply	9 to 28Vdc; Under/Over Voltage Protection & Reverse Polarity Molex 43025-0400 4-Pin Locking Connector
Average Current Draw	130mA @ 13.8Vdc (Idle)
Transmit Current Draw	350mA @ 13.8Vdc

Ordering data

Type	Part No.
3G MODEM RS232 2DI 2DO 2AI 2AO	615M-1

Notes	(1) UMTS, (2) HSPA, (3) EDGE, (4) GPRS, (5) EVDO Rev A (IS-856-A), (6) 1xEVDO Rev 0 (IS-856), (7) 1xRTT (IS-2000), (8) Access via SNMP only
--------------	---

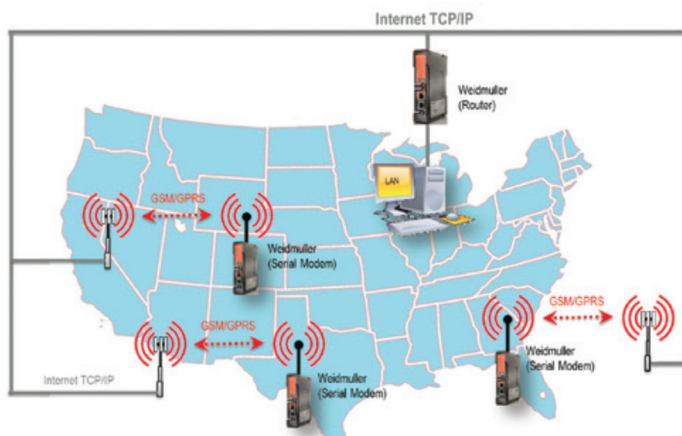
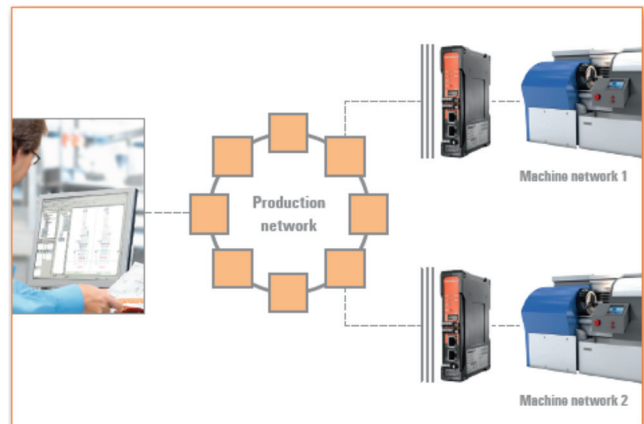
Application Notes



Want to be able to communicate with machinery and systems securely, reliably and from anywhere?

The router can translate between the addresses of various networks with protocols like port forwarding and 1:1 NAT masquerading.

These functions conceal all of the machine's IP address downstream of the router.



Communication between networks is done securely via the two Gigabit ports on the LAN/WAN interface.

The integrated VPN is also ideally suited to secure remote access to the LAN, via either a wired or wireless 3G/UMTS Internet connection.

Quad Band Antennas

WI-ANT-GSM-LTE-3DB Mobile



WI-ANT-GSM-STUB-2DB LP



WI-ANT-GSM-STUB-SMA



Technical Data

Maximum Power	100 Watts	8 Watts	5 Watts
Polarization	Vertical	Linear	Vertical Linear
Nominal Impedence	50 Ohms	50 Ohms	50 Ohms
VSWR across the band	< 2.0:1	< 2.5:1	< 2.0:1
Radome Material	PVC (IP66)	PVC	PVC
Termination	Dertermined by thru-panel base	Male SMA c/w 17ft (5 meter) RG-174 cable	Male SMA
Mounting Base Diameter	Compatible with most 1/8"-8 thread mounts, including 3/4" hole mounts	1-1/2" through hole mount. Mount assembly includes flat adapter shim for installations or larger	Direct connection 180° swivel, 0°-90° knuckle
Electrical Specifications			
Frequency Range	698-2700 MHz	824-896 MHz 1710-1990 MHz	806-960 MHz / 1.71-2.17 GHz
Gain	3dBi	2dB +/- 1dB@900 MHz, 1dB +/- 1dB@1800 MHz	0dBi
Mechanical Specifications			
Antenna Type	Low Profile Whipless	GSM Multi-band Through Hole Low Profile	Low Profile Whip
Connector Type	For use with thru-panel base (6720005277)	Male SMA	Male SMA
Antenna Height	2.4"	0.59" (1.5cm)	7-5/8" (19.4 cm)
Equivalent Flat Plate Area	1.5" OD	3.1" (8cm)	
Weight lbs (kg)	0.29 (0.13)	0.45 (0.24)	0.15 (0.06)
Temperature Range	-40 to +70°C	-40 to +70°C	-40 to +70°C

Ordering Data

	Type	Part No.	Type	Part No.	Type	Part No.
	WI-ANT-GSM-LTE-3DB Mobile	6720005450	WI-ANT-GSM-2DB LP	6720005451	WI-ANT-GSM-STUB-SMA	6720005452



Region Specific Antennas

850 MHz Omni Directional

Gain	Description	Type	Connector Type	Part No.
0 dBd	Mount Bkt & 15ft cable	WI-ANT-DPL-0-16	SMA male	6720005080

900 MHz Omni Directional

Gain	Description	Type	Connector Type	Part No.
0 dBd	Inc. 6720005271 clamp/brkt	WI-ANT-900MHZ-0DB OMNI NF	N female	6720005233
3 dBd	Inc. 6720005271 clamp/brkt	WI-ANT-900MHZ-3DB OMNI NF	N female	6720005234
5 dBd	Inc. 6720005271 clamp/brkt	WI-ANT-900MHZ-5DB OMNI NF	N female	6720005235

Other versions and Frequencies available on request



Inside the Box Connection Cables

(Surge Arrestor to Bulkhead Connections)

Cable Length (ft)	Connector Type	dB Loss 900Mhz	dB Loss 2.4GHz	dB Loss 5.8GHz	Cable Type	Type	Part No.
1	SMA male - SMA male	0.1	0.2	0.3	PFP 195	WI-ACC-TYP195-1FT SMA M-SMA M	6720005243
2	SMA male - SMA male	0.2	0.4	0.7	PFP 195	WI-ACC-TYP195-2FT SMA M-SMA M	6720005244
3	SMA male - SMA male	0.3	0.6	1.0	PFP 195	WI-ACC-TYP195-3FT SMA M-SMA M	6720005245
1	SMA male - N male	0.1	0.2	0.3	PFP 195	WI-ACC-TYP195-1FT SMA M-NM	6720005270
2	SMA male - N male	0.2	0.4	0.7	PFP 195	WI-ACC-TYP195-2FT SMA M-NM	6720005260
3	SMA male - N male	0.4	0.6	1.0	PFP 195	WI-ACC-TYP195-3FT SMA M-NM	6720005259



Outdoor Rated Cables

(Bulkhead to Antenna Connection)

Cable Length (ft)	Connector Type	dB Loss 900Mhz	dB Loss 2.4GHz	dB Loss 5.8GHz	Cable Type	Type	Part No.
1	N male - N male	0.1	0.2	0.2	PFP 400	WI-ACC-TYP195-1FT NM-NM	6720005246
2	N male - N male	0.2	0.4	0.4	PFP 400	WI-ACC-TYP195-2FT NM-NM	6720005247
3	N male - N male	0.3	0.6	0.6	PFP 400	WI-ACC-TYP195-3FT NM-NM	6720005248
10	N male - N male	0.4	0.7	1.1	PFP 400	WI-ACC-TYP400-10FT NM-NM	6720005251
25	N male - N male	1.0	1.7	2.7	PFP 400	WI-ACC-TYP400-25FT NM-NM	6720005252

Surge & Bulkhead Mounts

Item Type	Description	Part No.
WI-ACC-BULK - ADAP SMA-F-NF	Bulkhead Adapter SMA-F-NF	6720005265
WI-DIV-CCMA	Surge Protection SMA male to SMA female (direct connection) Quad Band	6720005111
WI-ACC-BH-BASE 5/8 HOLE NF	Thru-panel mounting base for low profile antennas	6720005277

