F. FIBER OPTIC DOWNSTREAM RECEIVER

RF

Frequency Range	45 to 1002 MHz
Output Level input,	24 dBmV @ -4 dBm optical 80 NTSC channels loading +450 MHz digital loading

OPTICAL

Bandwidth	1200 to 1620 nm (WAS Option: 1490 to 1620 nm)
Input Power	-8 to -1 dBm
Connector	SC/APC - standard (Other types available) Power adapter included. Optional power inserter is available. Specify line voltage and plug type when ordering.
Return Loss	≥ 60 with APC type connector

LINK PERFORMANCE

CNR	≥ 48 dB @ -4 dBm optical input
CSO	≤ -63 @ -4 dBm optical input
CTB	≤ -65 @ -4 dBm optical input
Impedance	75 Ohms
Output Return Loss	> 16 dB
Flatness	±1 dB

G. ELECTRICAL / ENVIRONMENTAL / MECHANICAL

Power connector	12 VDC / 200 mA F-type
dedicated	AC / DC power adapter to PWR input port or RF output port with optional power inserter
Operating Temperature	-40 to +60 °C (-40 to +145 °F) ambient
Humidity	Up to 95% non-condensing
Dimensions (W x H x D)	86 x 59.8 x 25.8 mm (3.4 x 2.4 x 1 in)
Weight	142 g (5 oz)

H. CONFIGURATION / ORDERING OPTIONS

The PCT-UMFN-xAS needs to be ordered with the appropriate power adapter, based on the country in which it is going to be used. Please refer to PCT International, Inc. product literature for specific information on the proper power adapter needed.

2260 West Broadway Road | Mesa, Arizona 85202-1898 | USA
+1.480.813.0925 | Fax +1.480.545.1080 | info@pctintl.com

INSTALLATION GUIDE

PCT-UMFN-xAS
ULTRA MINI FIBER NODE
Ver 20150723a
(PCT-UMFN-AS & PCT-UMFN-WAS)

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INSTALLATION GUIDE
PCT-UMFN-xAS ULTRA MINI FIBER NODE
Ver 2013112150723a

A. PRODUCT DESCRIPTION

The Ultra Mini Fiber Node (UMFN) is a low cost fiber optic receiver that is engineered and manufactured to a micro-sized "footprint". Requiring minimal installation and maintenance effort, the UMFN is designed for complete functionality in applications where a full-featured node is not required.

Suited for "limited space" component setups, the UMFN's applications include: FTTH, PON, communications and closed-circuit security systems, as well as special events installations, emergency restorations, and rebuild, upgrade, and retrofit projects.

B. FEATURES

- 1 GHz design
- Wideband receiver operates over wavelengths from 1200 to 1620 nm (1490 to 1620 nm with WAS option) with an optical input of -8 to -1 dBm
- Excellent performance specifications
- Perfect for FTTx video overlays
- Ultra small, modular form factor for simple installation
- Internal filter version is ideal in PON network overlays (WAS option)
- Use in high-density applications (MDUs, schools / universities, hospitals, business parks, & PEGs)

C. PACKING LIST

- Mini Fiber Node unit
- Power Transformer (per customer specification)
- Product Manual

TECHNICAL ASSISTANCE

For further assistance concerning equipment installation, technical questions, or troubleshooting, contact PCT International, Inc.

D. INSTALLATION

1. FIBER OPTIC DOWNSTREAM RECEIVER

a. Measure optical power at input to receiver

1) If optical power > -1 dBm, add an optical attenuator until optical level is between -8 to -1 dBm (optimum = -4 dBm).

2) If optical power < -8 dBm, performance will be degraded. Check fiber optic jumpers, ensuring the connectors are clean.

b. Clean optical connector per maintenance instructions. (See section E.)

c. Verify correct optical connector is being used (SC/APC is standard on the UMFN)

d. Insert optical connector into socket labeled "**OPTIC IN**".

2. RF CABLE

a. Install type F-male connectorized RF coaxial cable to "**RF OUT**" port.

3. POWERING

a. Verify AC voltage rating on the included power adapter is correct for the available power source.

b. Connect F-male connectorized RF coaxial cable to the power adaptor and the "**POWER IN**" port.

c. ***Optional***: In case of reverse powering through the RF port:

1) Connect an F-male connectorized RF coaxial cable between "**RF OUT**" port on the Mini Fiber Node and the port labeled "**TO AMP**" on the power inserter (PCT-MPI -1G).

2) Connect the F-male connectorized RF coaxial cable to the power adaptor and the port labeled "**DC IN**" on the power inserter.

3) Connect F-male connectorized RF coaxial cable from "**TO TV**" port on the power inserter to network.

d. Connect the power adaptor to AC voltage source.

4. POWERING ON

a. Check for power light on the UMFN, i.e. green LED indicator next to the "**POWER IN**" port.

5. RF OUTPUT LEVEL

a. Verify RF output level with a spectrum analyzer or RF field strength meter.

NOTE: If powering through an optional power inserter (PCT-MPI-1G), check the RF output level at the "TO TV" port of the power inserter.

NOTE: Typical levels will be +24 dBmV with –4 dBm optical input to the "OPTIC IN" port.

E. MAINTENANCE

DANGER: AVOID DIRECT EXPOSURE TO THE LASER BEAM.

Invisible radiation continues when open or when operating with fiber optic cable disconnected. Never operate unit with a broken fiber or with fiber connector disconnected.

1. PCT recommends using the following cleaners to properly clean optical adapters and connectors.
   a. Optical Fiber Adapters
      1) See PCT-FAC-500 Optical Fiber Adapter Cleaner instruction guide.
   b. Optical Fiber Connectors
      1) See PCT-FCC-500 Optical Fiber Connector Cleaner instruction guide.

CAUTION: To prevent dust-particle abrasion, do NOT spray compressed air directly onto the connector's end face.

To avoid eye injury, NEVER look directly into the connector's end face.