

# Addendum

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**Title:** PremNet 850nm Link Module Addendum

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## Introduction

A new release of the PremNet 850nm 10db Multi-Mode Link Module (PN 850004) is available. The new module is a PremNet Unilink Module (PN 850124). Please note that the transmit power and receiver sensitivity specifications are slightly different from those specifications in the previous link module (see *Comparison of New and Old 850nm Link Modules* in this addendum).

The following table replaces Table A-1 in Appendix A of the *PremNet Broadband Access System Installation and Operation Manual*.

**Table 1. Link Module Fiber-Optic Parameters**

Module Type	TX power (dBm)			RX Sensitivity @ 10E-10 BER (dBm)		Loss Budget TX-RX Min/Typ	Distance* (km) Max/Typ
	Min	Typ	Max	Min	Typ		
850nm 10dB multimode	-19	-17	-15	-29	-30	10/13	> 0.5
1300nm 15dB multimode	-14	-11	-7	-30	-35	16/24	8/5
1300nm 15dB singlemode	-12	-10	-8	-30	-36	18/26	50/35
1300nm 25dB singlemode	-3	-1	+1	-30	-36	27/35	70/55
1550nm 25dB singlemode	-2	0	+2	-30	-36	28/36	> 55
1260nm-1360 nm SONET/SDH	-12	-10	-8	-32	-35	20/25	15/40
1280nm-1335nm SONET/SDH	-5	-1	0	-34	-37	29/36	40/50
1530nm-1570nm SONET/SDH	-3	0	+2	-34	-37	31/37	>100

\* Maximum distances are nominal at room temperature. Typical distances are nominal over 0 to 50° C.

- For short-distance applications (< or = .5 km), 850-nm multi-mode modules are acceptable. For long-distance applications (< or = 50 km), 1300-nm single-mode modules with laser diode transmitters are available.

## 100 Mbps 850nm Link Module Specifications

The following specifications replace the existing 850nm multi-mode link module specifications in Appendix A of the Installation and Operation manual. Specifications listed are minimum, typical, maximum, and units.

### 10dB 850nm Multi-mode ST Link Module

#### Optical Specification

<b>Transmitter @ 25°C</b>	<u>Min.</u>	<u>Typ.</u>	<u>Max.</u>	<u>Units</u>
Wavelength		850		nm
Coupled optical output power*				
@ 62.5/125 micron fiber	-19	-17	-15	dBm
Spectral width (FWHM)		50		nm
Rise/fall time		2.5/3.5		nsec
Emitter type		LED		

\* The coupled output power includes the loss of two connectors.

<b>Receiver @ 25°C</b>	<u>Min.</u>	<u>Typ.</u>	<u>Max.</u>	<u>Units</u>
Wavelength		850		nm
Sensitivity (10E-10 BER)	-29	-30		dBm
Receiver overload	-7			dBm
Rise/fall time		3.0		nsec
Detector type		PIN		

#### Fiber Specification

62.5/125-micron graded index fiber

Bandwidth MHz/km                      160 min\*

\* Increased distance can be obtained by using higher bandwidth/quality fiber.

## Comparison of New and Old 850nm Link Modules

Table 2 lists the transmitter output power, receive sensitivity, loss budget, and nominal distances for the old (850004) and new (850124) 850nm link modules.

**Table 2. Link Module Fiber-Optic Parameters**

Module Type	TX power (dBm)			RX Sensitivity @ 10E-10 BER (dBm)		Loss Budget TX-RX Min/Typ	Distance* (km) Max/Typ
	Min	Typ	Max	Min	Typ		
850nm 10dB multi-mode 850004	-17	-14	-12	-27	-30	10/16	> 0.5
850nm 10dB multi-mode 850124	-19	-17	-15	-29	-30	10/13	0.5

### Loss Budget

Table 3 lists the measurements taken of an old and new module, which are representative.

You should take care when using the new 850124 module with the old 850004 module to ensure that they do not exceed the loss budget when these modules are connected together.

**Table 3. Loss Budget**

Loss Budget	minimum	average	maximum	units
New TX, New RX	10.58	12.69	14.87	dB
Old TX, Old RX	10.95	13.13	15.94	dB
New TX, Old RX	8.2	10.82	13.5	dB
Old TX, New RX	13.3	15.31	17.31	dB