

Infrared Fast Ethernet 100 Mbps

INET 100

APPLICATION

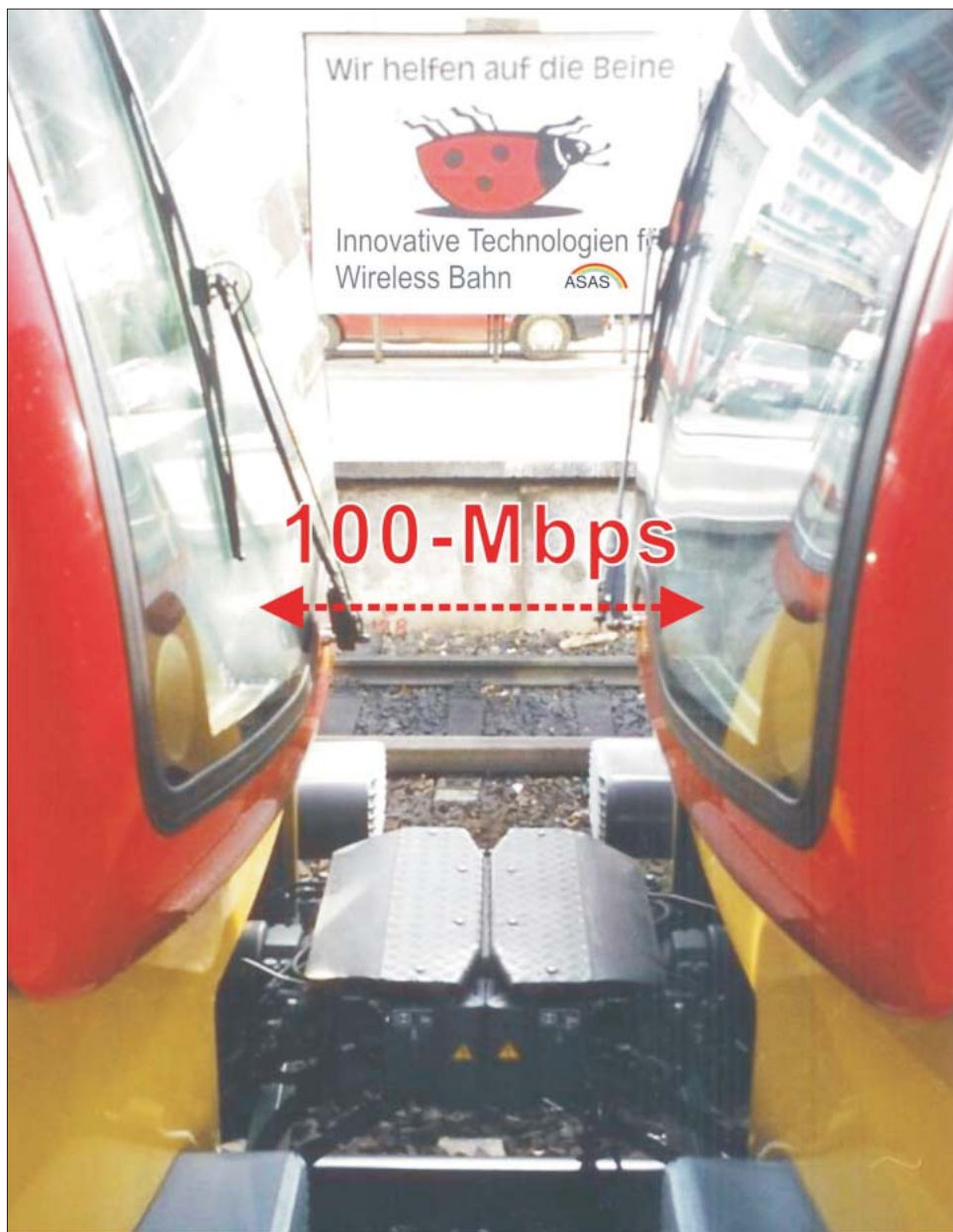
INET 100 is the infrared interface

for the wireless coupling of fast Ethernet computer networks,

the fast and particularly interference-proof alternative to WIRELESS LAN

For the PIS train bus or multi-media applications, for the rapid transmission of large data quantities

While stationary and during train operations.



FEATURES

Wireless infrared transmission between two carriages or two trains with any number of cars, between the train and the platform or between the train and the rail(s).

Functions are not affected by electro-magnetic interference fields. No disturbing influence on the environment.

Little input required for the installation, no wear and tear and a long service life.

No mutual interference of trains meeting en route.

The reliable transmission requires only a visual connection between the transmitter and receiver modules.

Universally applicable for the transmission standards IEEE 802.3 10 base T (10 Mbaud Ethernet transmission) and IEEE 802.3 100 base T (100 Mbaud fast Ethernet transmission).

Replaces the optical fiber connections or twisted pair lines in the coupling.

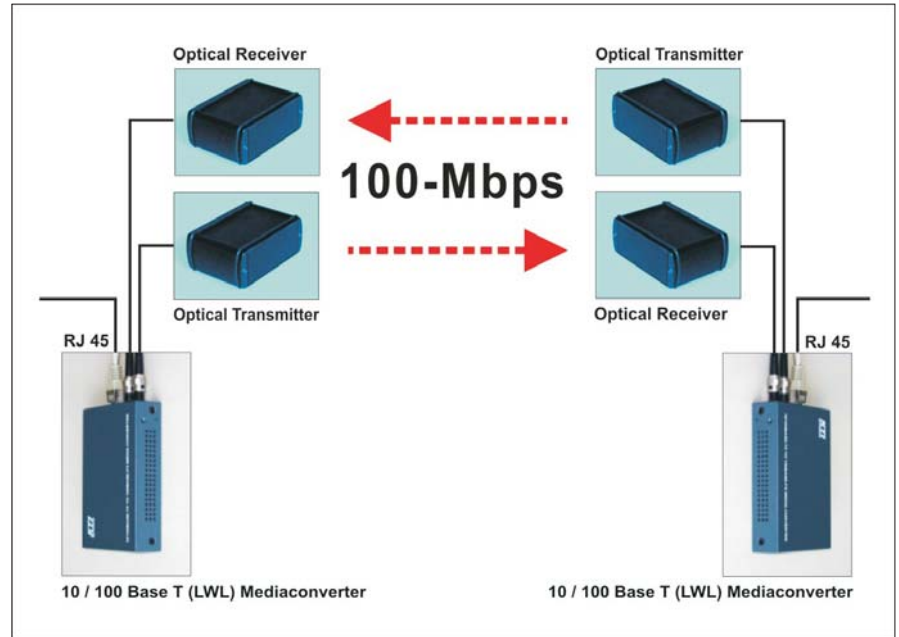
INET 100 consists of the INET MC modules and the detached (remote) optical INET 100x and INET 100 Rx modules that are required for one transmission line on both sides of the coupled trains or cars.

The optical INET 100x and INET 100 Rx modules will be installed on the front side of the vehicles in such a way, e.g. behind the wind screen, that the visual connection between the components is ensured. The spatial and geometric separation of Tx and Rx at the end of the carriages is necessary.

The horizontal geometric separation has the benefit that there will be no problems in the case of "revolved" couplings of trains or cars.

The transmitter Tx and the receiver Rx have extremely wide transmission angles so as to ensure the transmission in short-radius turns, at steep slopes or when the trains or cars make heavy tilting or rocking motions.

There are large energetic reserves which will reliably compensate any losses due to heavy soiling on the optically active surfaces, unsuitable weather conditions (snowfall) as well as a dampening effect on the wind screen itself (when the modules are installed there).



TECHNICAL DATA

A) Transmitter and Receiver

Transmission range	0 ... 15 m (*)
Transmission standard	IEEE 802.3 10 Base T (10-Mbaud-Ethernet-Transmission) IEEE 802.3 100 Base T (100-MBaud-Ethernet-Transmission)
Transmission angle	20° horizontal / 10° vertical
Receiving angle	20° horizontal / 10° vertical
Weight	ca. 400 g (Transmitter or Receiver)
Degree of protection:	IP 40 (Transmitter & Receiver)
Dimensions (L x W x H)	approx. 75 mm x 110 mm x 50 mm
Power supply	12 VDC (stabilized)
Power consumption	approx. 150 mA
Power supply Interface	
on device	ESTO P/N 09-9765-30-04
on cable	ESTO P/N 09-9764-70-04
LWL-Interface	
Mechanical Interface	connector receptacle ST
for mounting	Optical cable 62/125 , 1300 nm 2 x thread M5 @ ground plane

B) Mediaconverter

FX Port	plug ST Fibre optic 62/125, 1300 nm
TP Port	RJ 45 Cat 5 (100 Base-Tx) Cat 3,4,5 (10 Base-T)
Dimensions (L x B x H)	110 mm x 75 mm x 24 mm (**)
Power supply	5 VDC (stabilized)
Power consumption	approx. 300 mA

ORDERING INFORMATION

INET 100 - CTC

2 x INET 100 - CTC - Tx
2 x INET 100 - CTC - Rx
2 x INET 100 - MC
Option

Infrared Fast Ethernet for Car-to-Car
Transmission consisting:
Optical IR Transmitter
Optical IR Receiver
Mediaconverter
Fiber optic system cable

INET 100

Infrared Fast Ethernet for
Transmission range from
30 up to 500 m
delivery on request

(*) Transmission ranges up to 500 m (for point-to-point-Transmission) are possible

(**) option: Mediaconverter built in 19"- chassis 3HE7TE