

ITC2800



The world's most energy-efficient POCSAG base station

The ITC2800 follows a groundbreaking low power-consuming approach and thus supports green initiatives of many countries. On top of that, the PS19 power supply is equipped with features like wirebreak detection (EN 54-4), 5x shorter battery charging time, intelligent charging for battery longevity, inverse-polarity protection, Amphere-hour meter, overcurrent protection, additional input for temperature sensor. For network renewal, the ITC2800 can be operated in a mixed Swissphone POCSAG network together with its predecessors.

A fundamental improvement compared to the ITC2500 is given with the TRx19 transceiver. It allows free frequency entry directly within the GUI. ADC and RSSI Factory values are stored readily on the TRx19. This reduces operational errors and commissioning time.

The ITC2800 includes the following functional blocks:

- Power supply (PS19)
- Controller (G-T16R)
- POCSAG decoder card (RC09)
- POCSAG synchro card (SC2000)
- Transceiver (TRx19)

Options:

- GPS interface card
- I/O card with 7 inputs and 8 outputs
- Fan and temperature sensor in wall-mount case for active cooling
- Integrated SIMCOM LTE modem incl. antenna terminal on G-T16R
- Integrated RF monitoring directly at the Tx output and POCSAG message comparison

Key features

-))) Automatic response in the radio network
 - Decentralised alerting request
 - Transmission confirmation
 - Status check
-))) Extensive options for filtering log data using
 - 20 criteria
 - Time limitation ranging from 1s to infinity
-))) 3 ports for terminals (2x ETH, 1x serial)
-))) Extreme longevity
-))) Fast-reacting Single-Page web interface
-))) Parameterization by means of integrated radio channel



The ITC2800 assembled in wall-mount case

ITC2800

	Performance features	Technical data
General operating data	Operating temperature range	-25°C to +55°C
	Cooling system	Convection (optional with fan in wall-mount case)
	Input voltage	90-264VAC / 47-63Hz (optional: -48VDC)
	Power consumption	155W (optional: 220W)
	Internal bus system	AT96 (96pin-DIN41612)
	Compliance with EU regulations: Radio Equipment Directive (RED), 2014/53/EU RoHS Recast Directive, 2011/65/EU WEEE Directive, 2012/19/EU	Safety EN 62368-1 EMC ETSI EN 301489-1 ETS EN 301489-2 Radio ETSI EN 300113 RoHS EN 50581: 2012
	BOS approval (authorities and safety organisations, Germany)	DAU II xx/20
General radio data	Frequency bands (versions)	136-174MHz 400-470MHz
	Frequency stability (carrier)	±0.5ppm
	Number of channels (per frequency band)	99
	Channel spacing	12.5/20/25kHz
	Type of modulation / demodulation	DFSK max. 2.5kHz (@ 12.5kHz channel spacing) DFSK max. 4kHz (@ 20kHz channel spacing) DFSK max. 5kHz (@ 25kHz channel spacing)
	Switching bandwidth	Whole frequency band
	POCSAG data rate	512, 1200 or 2400 Baud
	Radio datarate	4800 baud
	Antenna connection	50Ω coax N-Type (1x TRx, 1x dual antenna use)
	Transmitter (Tx)	Tx output power
Duty cycle		100%
Receiver (Rx)	Sensitivity	<2µV (EMK) to decode 90% of digital alerts <-118dBm at 12dB SINAD (0.282µV)
Controller (G-T16R)	CPU	615MHz, 64-Bit
	RAM	1GB
	Flashdisk	2GB, safe against mains failure
	Operating system	Linux
	Peripheral interfaces	2x Gigabit Ethernet RJ45, 4x USB 2.0, 1x VGA (1920x1200), 1x RS232
Power supply (PS19)	Maximum output voltage/current	13.8V/8A + 5.1V/5.1A (140W) optional: 13.8V/12.5A + 5.1V/5.1A (200W)
	Battery low level protection	Yes
	Efficiency	80%, 10-15A typical charge
	Connection for rechargeable battery	Plug connection (rear panel ITC2800), 12VDC
	Autonomy (optional battery operation)	>5h with battery 12V 12Ah (at Tx output power of 25W and duty cycle 25%)
GPS (optional)	Supply voltage	3.3V or 5V (switch at GPS card)
	Frequency	1575.42MHz +/- 1.023MHz
	Signal acquisition time	26s (after cold start)
	Tracking sensitivity	-162dBm
I/O contacts (optional)	7 dry input contacts	5-25mA, 5-15VDC
	8 relay output contacts	40mA, 5VDC
LTE Modem (optional)	Supported LTE bands	B1, B3, B7, B8, B20, B38, B40
RF monitoring (optional)	Direct coupling of RF power	Yes
	POCSAG message comparison	Yes (OK / char errors / no message transmission)
Base station without wall-mount case (for 19")	Dimensions (W x H x D)	483mm (19" rack) x 134mm (3HU) x 315mm
	Weight	8.5 kg
Base station in wall-mount case (optional)	Dimensions (W x H x D)	600mm x 350mm x 500mm (internal 19", 6HU)
	Weight	36.5kg (assembled with battery)
	Protection class	IP42

Specifications subject to change



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