



IT900 DCSK TURBO

The next generation in Powerline Communication (PLC) networking at 500kbps, IT900 DCSK Turbo provides upper layer support for SE 1.0, SE 2.0, IPv4 and IPv6. IT900 is the first fully integrated PLC modem and application solution on a single chip to feature DCSK Turbo speed and robustness.

HOME/BUILDING AUTOMATION APPLICATIONS

- HVAC Control
- Security and Access
- Lighting Control
- Appliance Control
- Remote Diagnostics
- Telehealth Monitoring
- Street Light control
- And more...



ENERGY MANAGEMENT/SMART GRID APPLICATIONS

- Automated Meter Reading
- Automated Meter Management
- Advanced Metering Infrastructure
- Utility theft detection
- Pay per use metering
- Solar Panel control
- And more...

IT900 offers a full protocol stack to meet the demands of Energy Management/Smart Grid including (AMR/AMM/AMI) and Home/Building Automation.

IT900 features high in-phase and cross-phase reliability and offers Yitran's next generation Turbo DCSK technology to enable a high level of code efficiency, robustness and transmission speeds of up to 500Kbps.

IT900 is fully interoperable with Yitran's IT800 and IT700, and complies with worldwide regulations (FCC, ARIB, CENELEC). IT900 is available in a DSP (Digital Signal Processing) version with an external AFE and a SoC silicon solution with integrated AFE.

PHY LAYER

- Spread Spectrum DCSK Turbo
- Decision Feedback Equalizer
- Fully compliant with worldwide regulations FCC, Cenelec A&B, ARIB.
- Symbol Correlation with DFE.

MAC LAYER

- Adaptive Optimized CSMA/CA with Transmission Priority and Delay Control Mechanism.
- Transmission Services:
 - Internetwork Unicast & Broadcast.
 - Intranetwork Unicast & Broadcast.
- Upper Layer Channel and Packet Monitoring
- Optional Security Suite

UPPER LAYER OPTIONS

- Y-Net proprietary upper layer optimal for Automatic and Smart Metering Applications
- ZigBee/SE 1.0
- IP (IPv4 and IPv6)
- SE 2.0 (when available)

PARAMETER	VALUE	NOTE
Modulation SNR for AWGN SNR for CW noise	DCSK Turbo < -7dB < -30dB	Patented modulation technique
Frequency Operation Band	Within 100-400 kHz Within 9-95 kHz Within 95-125 kHz	FCC/ARIB Bands CENELEC Band A CENELEC Band B
Bit Rate	1.25 - 500 kbps 0.625 - 150 kbps 0.625 - 75 kbps	FCC/ARIB Bands CENELEC Band A CENELEC Band B
Error Correction	Forward short-block soft decoding error correction code and CRC-16	
Receiver Sensitivity	<1mV PTP	
Dynamic Range	>85dB	
Interface*	UART / SPI / I ² C / JTAG / dedicated A/D	Simple command language
Package*	HTQFP 100 pins	
I/Os*	24 general purpose I/Os	
Rx Power Consumption	< 80mW	
Network Size	2000 nodes	

*silicon solution



YITRAN COMMUNICATIONS
POWERING THE
SMART GRID

www.yitran.com

HEADQUARTERS

9 Yehoshua Hatzoref St.
Beer Sheva 84106
ISRAEL
T +972 8 623 5281
F +972 8 623 5282
yitran@yitran.com

RUSSIA & E. EUROPE

15 Podolskaya St. Apt. 5
St. Petersburg 198013
RUSSIAN FEDERATION
T +972 54 334 2319
yitranrussia@yitran.com

CHINA

Dong Fang Building
Room 1320
1500 Century Blvd.
Pudong, Shanghai CHINA
T +86-13801269893
yitranasia@yitran.com

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