

InteliLite^{NT}

SINGLE SET GEN-SET CONTROLLER



Description

The InteliLite^{NT} range offers a wide choice of integrated control solutions for gen-sets operating in single standby mode. Based on the field proven InteliLite architecture, the family of controllers fulfills every requirement from simple to complex and AMF to MRS applications – with specific models providing modem and internet control, user configuration and complete gen-set monitoring and protection.

All InteliLite^{NT} controllers are easy to use with an intuitive user interface and graphic display. All of these models also feature a built-in event and performance log. Some incorporate a backed-up real time clock and others with running hours reference which makes troubleshooting even simpler.

The new design brings seamless integration with the latest breed of EFI engines, which include Caterpillar, Cummins, Detroit Diesel, Deutz, GM, Isuzu, Iveco, John Deere, MAN, MTU, Perkins, Scania, Sisu, VM Motori, Volvo Penta and others. This offers a higher level of functionality with users able to display a comprehensive range of values from the EFI engine on standard analog gauges and true RMS measurement of electric values.

Benefits

- ▶ Less wiring and components
- ▶ Less engineering and programming
- ▶ Remote monitoring helps reduce call-out costs of service engineers
- ▶ Optional additional 8 binary inputs/outputs
- ▶ Optional Internet with control and monitoring over web pages
- ▶ Support of wireless Internet
- ▶ Active SMS/E-mails
- ▶ Direct communication with EFI engines
- ▶ Perfect price/performance ratio
- ▶ History log – easy troubleshooting and warranty claim handling



WebSupervisor
The WebSupervisor system, a secure web based remote monitoring system which allows equipment fitted with various types ComAp units to be monitored via the internet from a remote PC or other web enabled device such as smartphone, webbook, etc. It operates in any internet browser and needs no special software to be installed. User can view recorded data from their equipment, receive Email alerts on alarms and control the remote units. Dedicated App's for iPhone and Android provide a truly mobile constant connection with the monitored equipment.



LOCATE
ComAp's LOCATE system uses the power of cellular communications technology to provide users and peace of mind that the monitored asset is where it should be. Locate provides location data to the WebSupervisor system without the need for costly GPS positioning equipment and works anywhere there is a cellphone signal, even indoors. Not only will WebSupervisor show the position of the monitored equipment, it will also maintain a track history and show route of the movement on a map. LOCATE – Simply Here!



AirGate
Modern communications made simple. ComAp's powerful AirGate technology is provided in a range of our controllers and makes remote internet connection to the ComAp controller easy. Just register the AirGate enabled controller on our website and from then on let ComAp's unique system locate and maintain contact with the controller, no need to worry about VPN's, Static IP addresses or corporate firewalls, simple! "AirGate – Simply connected."



ComAp is a member of AMPS (The Association of Manufacturers of Power generating Systems).



ComAp products meet the highest standards, with every stage of production undertaken in accordance with the ISO certification obtained in 1998.

Features

- ▶ **3 phase AMF function¹⁾**
 - Over/Under frequency
 - Over/Under voltage
 - Voltage asymmetry
- ▶ **3 phase generator protections**
 - Over/Under frequency
 - Over/Under voltage
 - Current/Voltage asymmetry
 - Overcurrent/Overload
- ▶ **True RMS Voltage measurement**
 - 3 phase generator and mains¹⁾ voltages
 - Voltage range 277 V p-n, 480 V p-p
 - Maximal measured voltage 300 V p-n
 - PT ratio range 0.1–500
- ▶ **True RMS current measurements**
 - 3 generator phase currents
 - Current range 5 A
 - Maximal measured current 10 A
 - CT ratio range 1–5000
- ▶ **Power measurements**
 - Active/Reactive Power and Power Factor per phase
 - Genset Active and Reactive Energy counter²⁾
 - Mains Active and Reactive Energy counter³⁾
 - Apparent power
- ▶ **Event and performance log + RTC**
 - Flexible event based history with up to 119 events
 - Reason, Running hours + all important values are stored⁴⁾
 - Reason, Date and Time + all important values are stored²⁾
 - Battery backed-up RTC²⁾
 - Test Run scheduler¹⁾
- ▶ **User interface**
 - Graphic 128 × 64 pixels display
 - 2 languages, user changeable from PC
 - Wide range of languages in package
 - Setpoints adjustable via controller buttons or PC
 - Large font in user interface
 - Buttons with mechanical feedback
 - Customized front facia on request
- ▶ **Inputs and outputs**
 - 6/7¹⁾ or up to 14/15¹⁾ (with IL-NT BIO8) binary inputs
 - 6/7¹⁾ or up to 14/15¹⁾ (with IL-NT BIO8) binary outputs
 - 3 configurable analog inputs with wide list of predefined senders
 - Additional inputs/outputs available²⁾ via IG-IOM or IGS-PTM
 - Magnetic pick-up input
 - D+ pre-excitation terminal
 - Optional 8 analog gauge drive outputs, compatible with VDO, Style gauges
- ▶ **EFI engine support**
 - Cummins Modbus
 - Engine specific J1939 for all major manufacturers (see table below)
 - Diagnostic messages in plain text
- ▶ **SMS/E-mails**
 - SMS commands
 - E-mails⁵⁾
 - Alarm and event SMS
- ▶ **Miscellaneous features**
 - Support of telecom applications with special firmware
 - Integrates with UPS systems⁶⁾
 - Fuel theft protection
 - Mutual stand-by system
 - Automatic temperature based cooling/heating
 - Load shedding, dummy load
 - Customer logo screen
 - Two multipurpose timers
 - Alternative configuration (50Hz/60Hz)

- ▶ **Communication interfaces**
 - Optional RS232, RS485 (including Modem support) or USB plug-in interface
 - Modbus RTU/TCP (requires RS485 interface/IB-Lite)
 - Optional Internet/Ethernet via IB-Lite
 - On-line control and monitoring over web pages (embedded web server) via IB-Lite
 - Optional GSM modem/wireless Internet via IL-NT GPRS
- ▶ **Mechanical and operation parameters**
 - Unit dimension 120 × 180 mm
 - Sealed front face rated for IP65
 - Hard plexiglass LCD cover
 - Operation temperature:
 - -20°C to +70°C standard version
 - -40°C to +70°C low temperature version
 - Power supply voltage 8–36 V
 - Voltage drops shorter than 50 ms do not affect operation

ANSI code	Protection
59	Overvoltage
27	Undervoltage
47	Voltage asymmetry
81H	Overfrequency
81L	Underfrequency
50+51	Overcurrent*
46	Current unbalance
32	Overload
47	Phase rotation**
71	Gas (Fuel) level
50N + 64	Earth fault current

* For MRS 10 and AMF 20 models Shortcurrent only

** Fixed setting

IntelliLite^{NT} controllers support J1939 for all major brands:

- | | | | |
|------------------|--------------|-----------|---------------|
| • Caterpillar | • GM | • MAN | • Sisu |
| • Cummins | • Isuzu | • MTU | • VM Motori |
| • Detroit Diesel | • Iveco | • Perkins | • Volvo Penta |
| • Deutz | • John Deere | • Scania | and others |



Order codes

Controller	Order code
IntelliLite ^{NT} MRS 10	IL-NT MRS10
IntelliLite ^{NT} MRS 15	IL-NT MRS15
IntelliLite ^{NT} MRS 16	IL-NT MRS16
IntelliLite ^{NT} AMF 20	IL-NT AMF20
IntelliLite ^{NT} AMF 25	IL-NT AMF25

Accessories

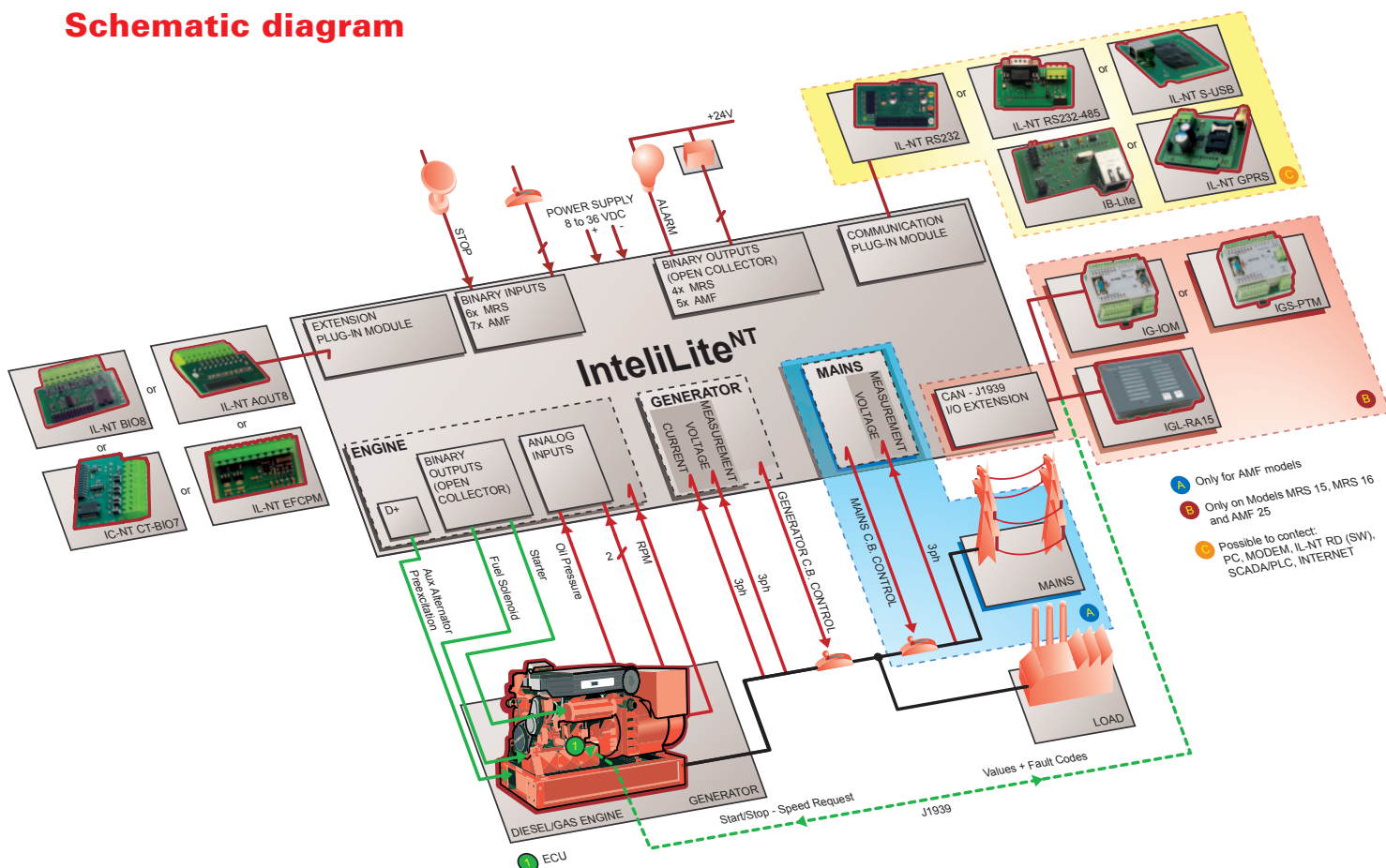
- ▶ **IL-NT RS232** – RS232 Extension Board
- ▶ **IL-NT RS232-485** – Dual Port Extension Board
- ▶ **IL-NT S-USB** – Service USB Module
- ▶ **IB-Lite** – Internet/Ethernet Plug-in Module including Web Server
- ▶ **IL-NT GPRS** – GSM Modem/Wireless Internet Module
- ▶ **IL-NT AO8** – Analog Outputs for PWM Gauges Module
- ▶ **IL-NT BIO8** – Binary Input/Output Module
- ▶ **IC-NT CT-BIO7** – Hybrid Current Input & Binary Input/Output Extension Module
- ▶ **IL-NT EFCPM** – Earth Fault Current Protection Module
- ▶ **IL-NT RD (SW)** – Remote Display Software for IntelliLite^{NT} Controllers
- ▶ **IGS-PTM²⁾** – Analog/Binary Input/Output Module
- ▶ **IG-IOM²⁾** – Analog/Binary Input/Output Module
- ▶ **IGL-RA15²⁾** – Remote Annunciator

Key:

MRS – manual and remote start controller
AMF – automatic mains failure start controller

- 1) Only for AMF models
- 2) Only for MRS 15, MRS 16 and AMF 25 models
- 3) Only for AMF 25 models
- 4) Only for MRS 10 and AMF 20 models
- 5) E-mails only for IB-Lite
- 6) Detail information available on request

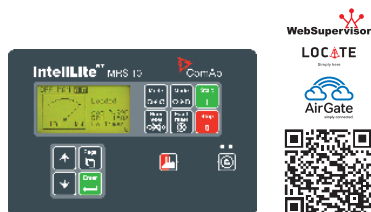
Schematic diagram



Available models

MRS 10

MANUAL AND REMOTE START CONTROLLER



- ▶ 3 configurable analog inputs
- ▶ Magnetic pickup input
- ▶ D+ preexcitation terminal
- ▶ 6 binary inputs
- ▶ 6 binary outputs
- ▶ Automatic GCB control
- ▶ Running hours event and performance log
- ▶ Plug-in extension modules capability

MRS 15

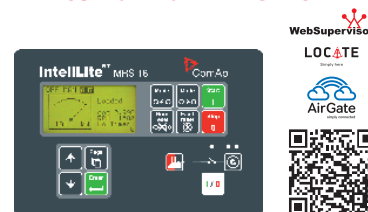
MANUAL AND REMOTE START CONTROLLER WITH SUPPORT FOR EFI ENGINES



- ▶ 3 configurable analog inputs
- ▶ Magnetic pickup input
- ▶ D+ preexcitation terminal
- ▶ 6 binary inputs
- ▶ 6 binary outputs
- ▶ Automatic GCB control
- ▶ CAN with J1939 support
- ▶ Plug-in and CAN bus extension modules capability
- ▶ RTC event and performance log

MRS 16

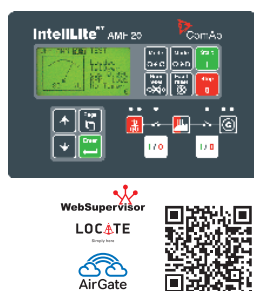
MANUAL AND REMOTE START CONTROLLER WITH SUPPORT FOR EFI ENGINES



- ▶ 3 configurable analog inputs
- ▶ Magnetic pickup input
- ▶ D+ preexcitation terminal
- ▶ 6 binary inputs
- ▶ 6 binary outputs
- ▶ Automatic and manual GCB control
- ▶ CAN with J1939 support
- ▶ Plug-in and CAN bus extension modules capability
- ▶ RTC event and performance log

AMF 20

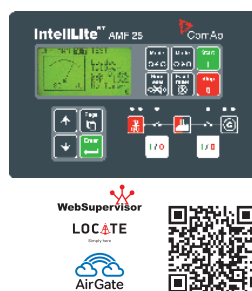
AUTOMATIC MAINS FAILURE START CONTROLLER



- ▶ 3 configurable analog inputs
- ▶ Magnetic pickup input
- ▶ D+ preexcitation terminal
- ▶ 7 binary inputs
- ▶ 7 binary outputs
- ▶ Automatic and manual GCB and MCB control
- ▶ Gen-set current/power measurement
- ▶ Running hours event and performance log
- ▶ Plug-in extension modules capability

AMF 25

AUTOMATIC MAINS FAILURE START CONTROLLER WITH SUPPORT FOR EFI ENGINE



- ▶ 3 configurable analog inputs
- ▶ Magnetic pickup input
- ▶ D+ preexcitation terminal
- ▶ 7 binary inputs
- ▶ 7 binary outputs
- ▶ Automatic and manual GCB and MCB control
- ▶ CAN with J1939 support
- ▶ Plug-in and CAN bus extension modules capability
- ▶ RTC event and performance log
- ▶ Dual AMF/Mutual stand-by system
- ▶ Gen-set current/power measurement

Typical applications



WebSupervisor

LOCATE
Simply here

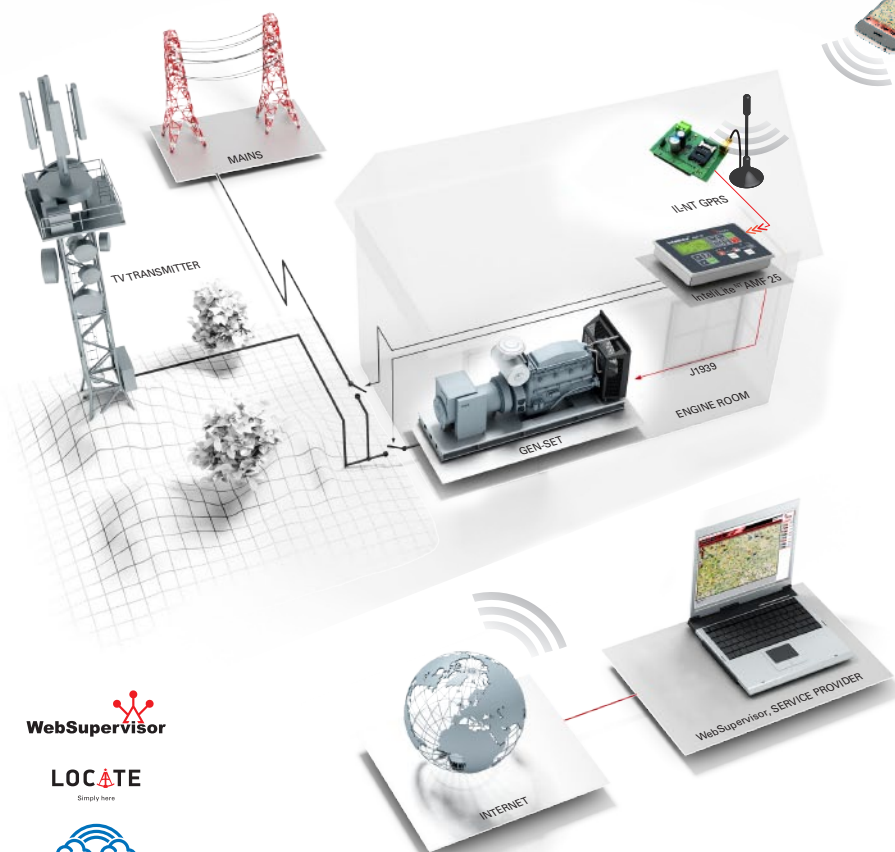
AirGate
Simply connected

PRIME MOVER SYSTEM REMOTE MONITORING VIA INTERNET

- ▶ Manual and remote start of gen-set with electronic engine. Intelilite^{NT} MRS 16 starts, controls and monitors the gen-set and controls the circuit breaker to supply the load.
- ▶ Service provider can monitor and control gen-set operation remotely via Internet.
- ▶ Controller sends active E-mails upon alarm event.
- ▶ Generator is protected by built in over/under voltage and frequency protections and IDMT overcurrent protection.
- ▶ Controller communicates with engine management unit by CAN J1939 bus. Engine values and alarms are visible on graphical LCD screen in plain language – no need to learn cryptic flashing or numeric error codes.

Scope of supply:

- ▶ 1x Intelilite^{NT} MRS 16
- ▶ 1x IB-Lite



WebSupervisor

LOCATE
Simply here

AirGate
Simply connected

STANDBY SYSTEM REMOTE MONITORING VIA INTERNET

- ▶ Stand-by gen-set with electronic engine. Intelilite^{NT} AMF 25 continuously monitors a mains supply and automatically starts an engine and switches load to a standby generator set in case of mains failure.
- ▶ Service provider can monitor gen-set operation remotely via GPRS modem.
- ▶ Operator can use LiteEdit for single gen-set view or WebSupervisor for fleet management.
- ▶ Generator is protected by built in over/under voltage and frequency protections and IDMT overcurrent protection.
- ▶ Controller communicates with engine management unit by CAN J1939 bus. Engine values and alarms are visible on graphical LCD screen in plain language – no need to learn cryptic flashing or numeric error codes.

Scope of supply:

- ▶ 1x Intelilite^{NT} AMF 25
- ▶ 1x IL-NT GPRS

Function Overview of IntelliLite^{NT} Controllers

	IntelliLite ^{NT} MRS 10	IntelliLite ^{NT} MRS 15	IntelliLite ^{NT} MRS 16	IntelliLite ^{NT} AMF 20	IntelliLite ^{NT} AMF 25
Model	MRS 10	MRS 15	MRS 16	AMF 20	AMF 25
Order code	IL-NT MRS10	IL-NT MRS15	IL-NT MRS16	IL-NT AMF20	IL-NT AMF25
Binary inputs/outputs	6 / 6	6 / 6	6 / 6	7 / 7	7 / 7
Analog inputs	3	3	3	3	3
Magnetic pick-up	●	●	●	●	●
AMF function/MRS function	- / ●	- / ●	- / ●	● / ●	● / ●
Input configuration	●	●	●	●	●
Output configuration	●	●	●	●	●
Voltage measurement Gen./Mains	3 ph / -	3 ph / -	3 ph / -	3 ph / 3 ph	3 ph / 3 ph
Current measurement	3 ph	3 ph, IDMT overcurrent	3 ph, IDMT overcurrent	3 ph	3 ph, IDMT overcurrent
kW/kWh/kVA measurement	● / - / ●	● / ● / ●	● / ● / ●	● / - / ●	● / ● / ●
Generator protections	●	●	●	●	●
Earth fault current protection	-	0	0	-	0
Full history file/Running hours history	- / ●	● / -	● / -	- / ●	● / -
RTC with battery	-	●	●	-	●
GCB/MCB control with feedback	● ¹⁾ / -	● ¹⁾ / -	● ²⁾ / -	● / ●	● / ●
D+ battery charging alternator circuit	●	●	●	●	●
Engine hours	●	●	●	●	●
CAN-J1939 interface	-	●	●	-	●
Internet support with Web server	with IB-Lite	with IB-Lite	with IB-Lite	with IB-Lite	with IB-Lite
Internet support over GPRS	with IL-NT GPRS	with IL-NT GPRS	with IL-NT GPRS	with IL-NT GPRS	with IL-NT GPRS
Extension modules	-	IGL-RA15, IG-IOM, IGS-PTM	IGL-RA15, IG-IOM, IGS-PTM	-	IGL-RA15, IG-IOM, IGS-PTM
Remote communication interface ³⁾	0	0	0	0	0
Modbus interface	0	0	0	0	0
Remote display	0	0	0	0	0
Cummins Modbus	-	0	0	-	0
Active SMS/E-mails	0	0	0	0	0
Dummy load/Load shedding	●	●	●	●	●
Auto. temperature based heating/cooling	●	●	●	●	●

Key:

- included
- excluded
- 0 optional – plug-in module required
- 1) Automatic GCB control
- 2) Automatic and manual GCB control
- 3) RS232, RS485, USB, INTERNET, GPRS/GSM

Legend: IG-IOM/IGS-PTM: Analog/binary input/output modules
 IGL-RA15: Remote annunciator
 GCB: Generator circuit breaker
 MCB: Mains circuit breaker

References



United Arab Emirates

Generators equipped with IntelliLite^{NT} AMF 25

Prime Technology Power System first used IL-CU AMF 25 in their range of generators ranging from 50 kVA to 500 kVA, but since the introduction of the IntelliLite^{NT} range have now updated to using IntelliLite^{NT} AMF 25 gen-set controllers. The generators they supply are typically sound attenuated for use in the rental market and feature Deutz engines combined with Siemens Alternators.

"In our experience of using ComAp products we have never faced any problems with the controllers. We have also found the website support and all online files very helpful, allowing us run the fleet efficiently and without problems."

S. Kanaga Sundara Moorthy
Senior Electrical Engineer
www.primetechnologies.ae



Croatia

Easily integrated products

"When we started using ComAp's controllers it was true discovery for us! We very much appreciate the ability to easily integrate controllers into both standard and demanding applications."

Pre-defined options are superb for fast and easy modifications in respect of our customers needs. ComAp's great approach to product design is enjoyed by engineers during installation as well as by customers during later usage. It's quality you can feel under your fingertips!"

Hrvoje Ban
Service Engineer
www.adeo.hr

For more information about our products and applications visit

www.comap.cz

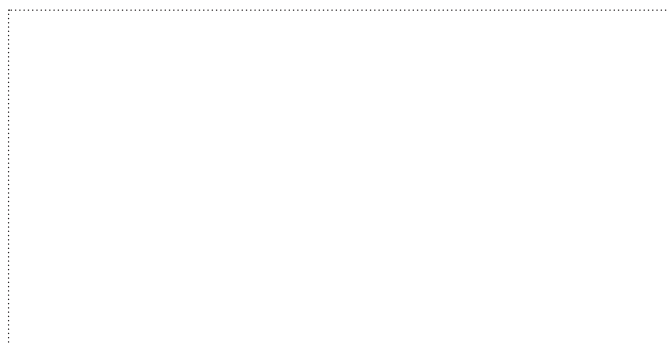


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LOCAL DISTRIBUTOR / PARTNER:



Customer satisfaction is our mission. We continuously develop the best people to succeed in our mission.