ALAGAR Oil Field Equipment & Services

EXCELINE
PERFORMANCE MATTERS

ALAGAR Oil Field Equipment & Services is UAE based service provider and ESP manufacturer with over 15 years of collective experience.

ALAGAR, derives its name from a simple belief that to be a true regional leader in provisioning of a total Electrical Submersible Pumping (ESP) solution, operational excellence is the only issue that matters.

ALAGAR introduces own line of ESP under product line name:

EXCELINE

The **EXCELINE Operating System (EOS)** integrates quality, occupational health & safety, and environmental management systems into one complete framework, enabling EXCELINE to work as a single unit with unified objectives.

EXCELINE PERFORMANCE MATTERS Operating System EOS

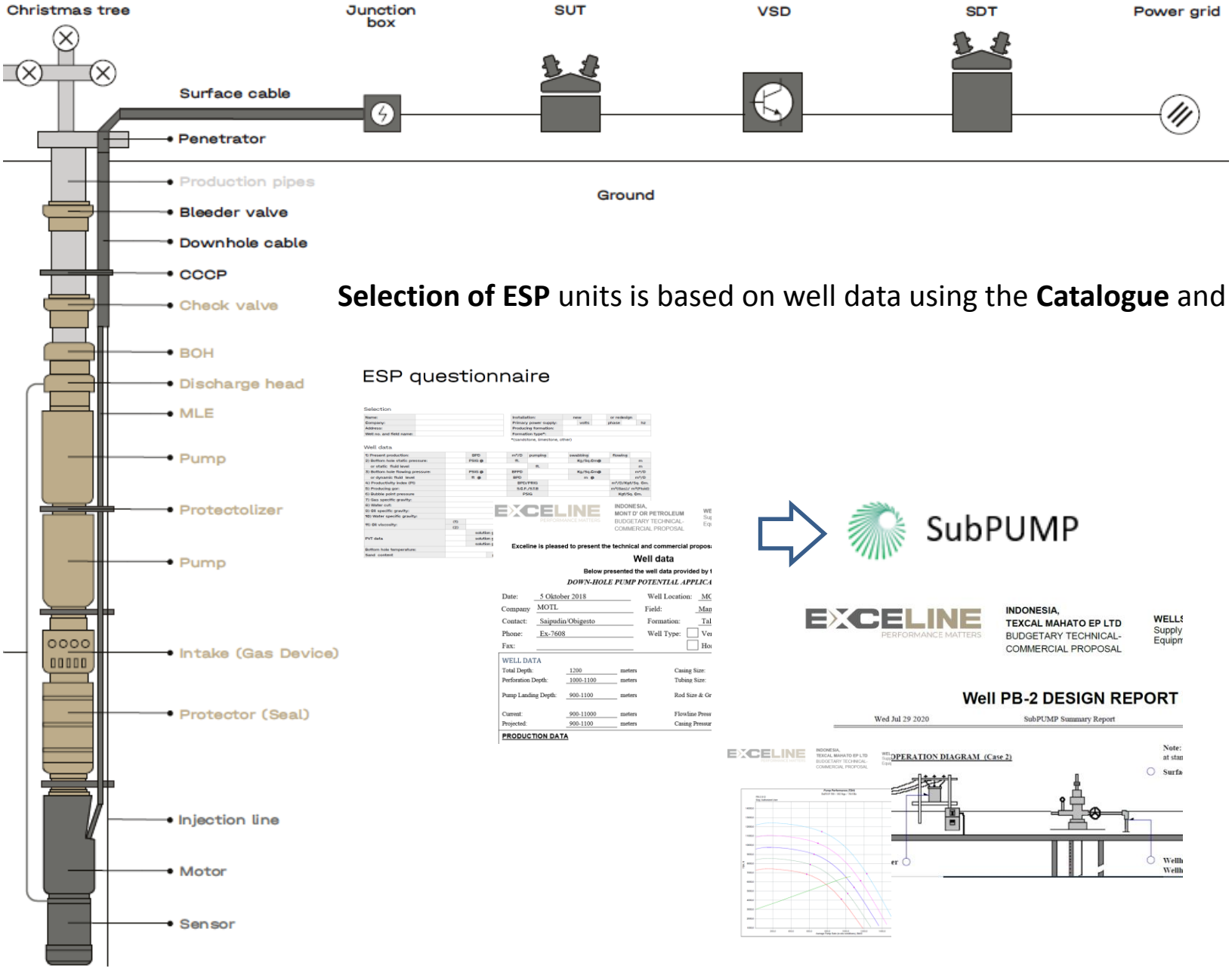
The **EXCELINE QMS**, embedded within EOS, is based on the latest revision requirements of ISO 9001, API Q1, and API Q2 international quality management system requirements:

GENERAL QMS requirements

Our industry QMS requirements for **MANUFACTURING**

Our industry QMS requirements for **SERVICE PROVISION**

ESP sizing & manufacturing



Selection of ESP units is based on well data using the **Catalogue** and the **Sub Pump**

ESP questionnaire

SubPUMP

ESP sizing & manufacturing

PUMP

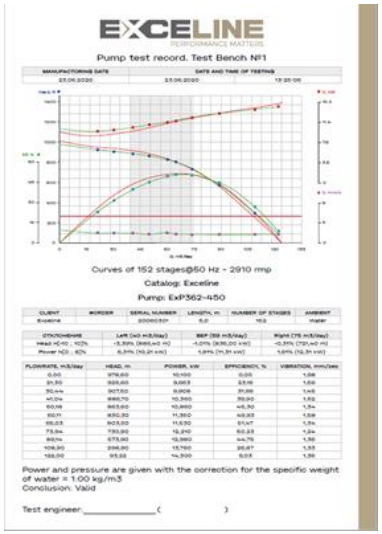
Example of abbreviation
ExP406-200 FLT 0.87 S14 84STG CR1 AR1 10

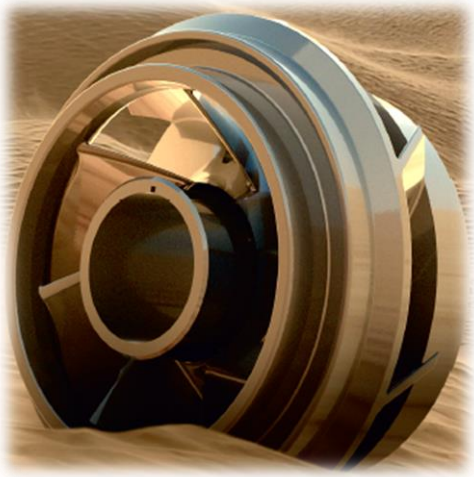
Short name:
ExP406-200

Housing Diameter (OD inch) — Optimum Operating Range BPD 60Hz

2.72	117 - 511
3.19	150 - 870
3.62	136 - 1880
4.06	136 - 2640
5.35	1600 - 12070

Manufacturing and testing we do basing on detailed ESP design and in accordance with API 11S2


EXCELINE
Pump test record. Test Bench №1
Curves of 152 stages@50 Hz - 2910 rmp
Catalog: Exceline
Pump: ExP362-450
Power and pressure are given with the correction for the specific weight of water = 1.00 kg/m3
Conclusion: Valid
Test engineer:



EXCELINE
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ESP sizing & manufacturing

MOTOR AM (Asynchronous)

Example of abbreviation
ExMA460-200 3600 1620V 76A S CR1 T2

Short name:
ExMA460-200

Range: 2,100 - 4,200 rpm

MA 406 Series H-Power (60 Hz): 25 .. 30 .. 35 .. 40 .. 45 .. 55 .. 60 .. 65 .. 70 .. 80 .. 90 .. 105 .. 115 .. 130 .. 150

MA 460 Series H-Power (60 Hz): 25 .. 30 .. 35 .. 40 .. 45 .. 55 .. 60 .. 65 .. 70 .. 80 .. 90 .. 105 .. 115 .. 130 .. 150
160 .. 180 .. 200 .. 225 .. 260 .. 290 .. 325 .. 400 .. 500

MA 512 Series H-Power (60 Hz): 35 .. 50 .. 70 .. 90 .. 115 .. 130 .. 145 .. 160 .. 180 .. 200 .. 225 .. 240 .. 260 .. 290 .. 400 .. 480 .. 580 .. 640

MOTOR PM (Permanent Magnet Motor)

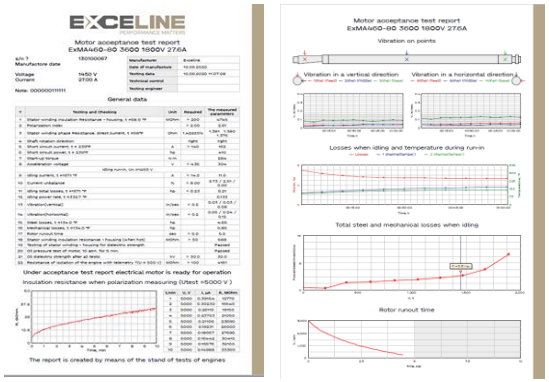
Range: 500 - 6000 rpm

MP 319 Series H-Power (60 Hz): 12 .. 20 .. 29 .. 37 .. 46 .. 57 .. 64 .. 72 .. 82

Range: 2,100 - 4,200 rpm

MA 460 Series H-Power (60 Hz): 30 .. 50 .. 65 .. 80 .. 100 .. 115 .. 130 .. 150 .. 170 .. 185 .. 200 .. 225 .. 245 .. 260 .. 275 .. 290 .. 310
325 .. 340 .. 400

Manufacturing and testing we do basing on detailed ESP design and in accordance with API 11S2



EXCELINE
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ESP sizing & manufacturing

PROTECTOR

Example of abbreviation
ExS406 LSBPB HL 0.87 S14 CR1 AR1

Short name:
ExS406 LSBPB

Series: 272 ….. 319 …. 362 …. 406 ….. 512

Thrust bearing load limit (69 Hz lb.): 1190 .. 3174 .. 2117 .. 3174 .. 4409

INTAKES GAS SEPARATOR GAS HANDLER
GAS SEPARATOR – HANDLER

Series: 272 ….. 319 …. 362 …. 406 ….. 535

BOLT-ON-HEAD CHECK VALVE
BLEEDER VALVE SAND TRAP

Example of abbreviation
ExBoH 2.875 8RD EUE CR1

Short name:
ExBoH 2.875

EXCELINE
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ESP sizing & manufacturing

WELLHEAD CABLE PENETRATOR

The cable penetrator provides tightness of the submersible cable outlet from wellhead up to 5000 PSI.

Example of abbreviation
ExWP2 5000 AWG4 CR2

Short name:
ExWP2

MOTOR LEAD EXTENTION

Example of abbreviation
ExMLE406 AWG7 4 450 CR0

Short name:
ExMLE406

DOWNHOLE SENSOR

Example of abbreviation
ExD1S362 2.875-Flg CR1 T2

Short name:
ExD1S362

Type of DHS:
1S – Downhole gage type 1. Intake T & P, motor vibration X & Y, motor oil temperature
2S – Downhole gage type 2. Intake T & P, motor vibration X & Y, motor oil temperature + pump discharge pressure

Series:
319
362
406
450

Connection type of discharge sub:
1. Tubing side: Thread – 2-3/8", 2-7/8", 3-1/2"
Flange with fasteners
2. Pump side: Thread – 2-3/8", 2-7/8", 3-1/2"
Flange with fasteners

Corrosion resistance design:
CR0 – carbon steel head, base and housing, carbon steel fasteners
CR1 – stainless steel head and base, carbon steel housing with anti-corrosion coating (super stainless flame coating), monel fasteners
CR2 – stainless steel head, base and housing, monel fasteners

Ambient temperature rating
T1 – for 248°F (120°C)
T2 – for 302°F (150°C)
T3 – for 338°F (170°C)

Double redundant downhole sensor

REMOTE MONITORING SYSTEM

1. Data collection

- Collecting telemetry data from a variety of sources
- Collecting data from third-party systems
- Collecting data from manual input forms
- Collecting data from the Internet

2. Data processing

- Filtering data from telemetry
- Obtaining the design parameters
- Data validation
- Data aggregation

3. Production control

- Representation of data in mnemonic diagrams, maps, and technical diagrams
- View the dynamics of changes in production indicators
- Monitoring of key indicators

4. Preparation of reports

- Generation of operational production reports
- Generating analytical reports
- Import\export from \ to Excel

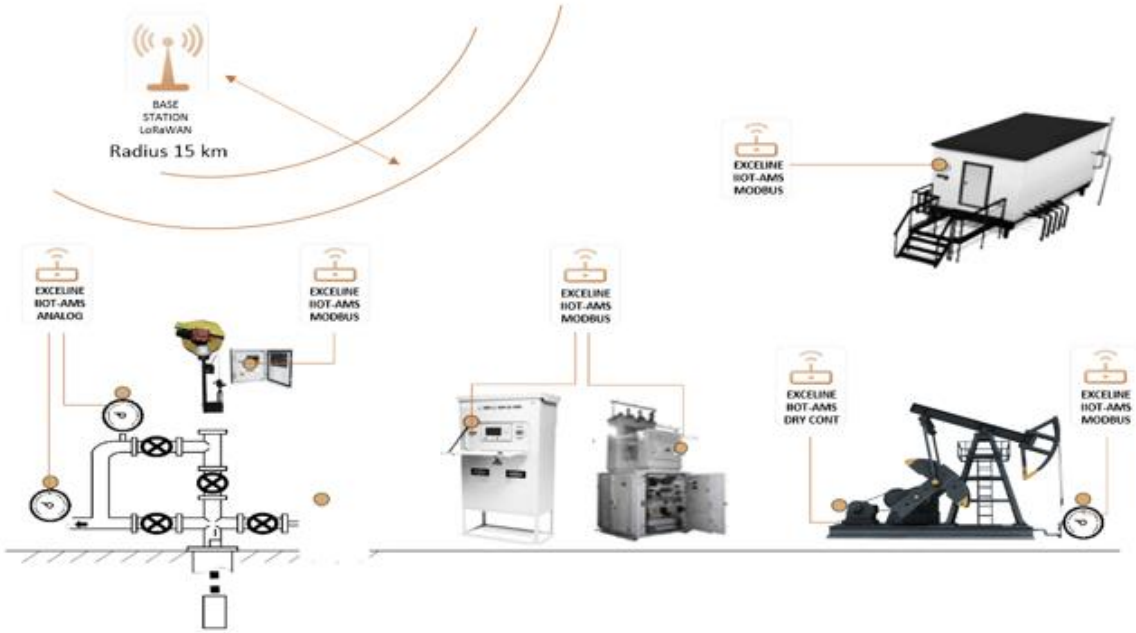
Technology	Way to transmit data to the server	Base station	Antenna for the BS	Client Station	Antenna for the CS
LoRaWAN	3G /4G / LAN	✓	✓	✓	
CELLULAR ROUTERS	3G/4G			✓	✓
WiMAX	LAN	✓	✓	✓	✓

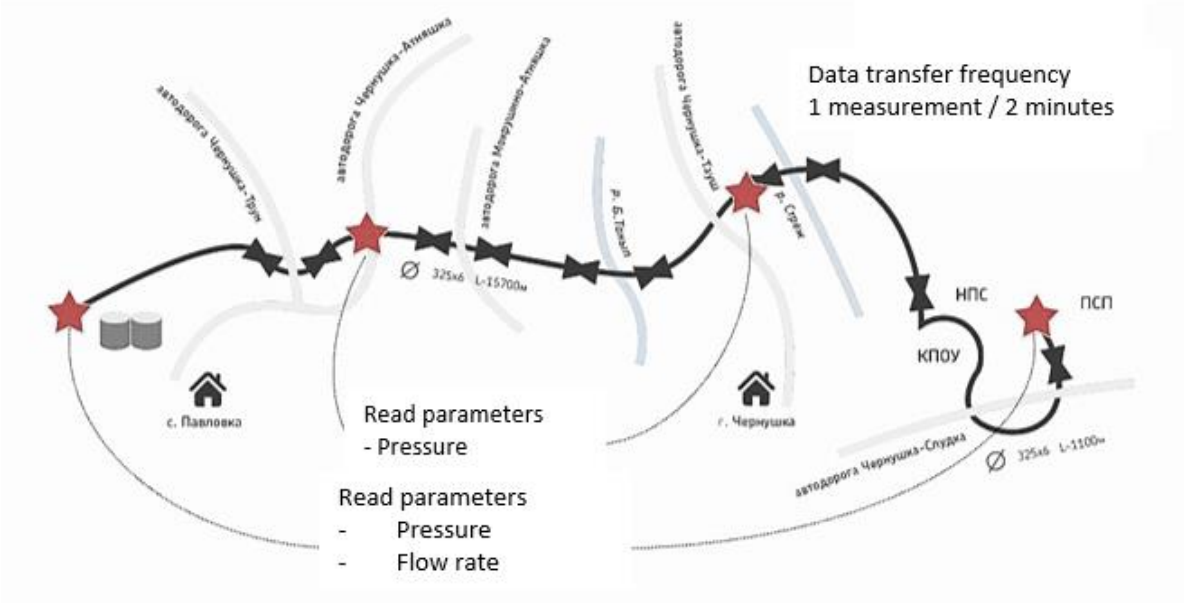
REMOTE MONITORING SYSTEM

LoRaWAN

Advantages Of LoRaWAN:

1. Does not require antenna alignment
2. Automatic selection of base stations
3. Does not require licensing
4. Easy to install
5. Noise immunity
6. Budget solution
7. Easy to set up





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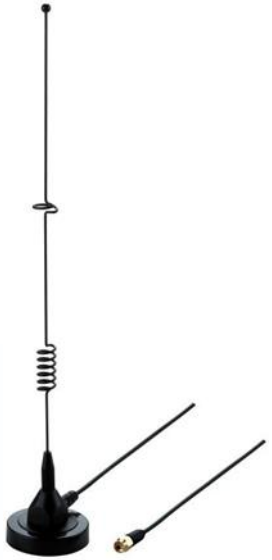
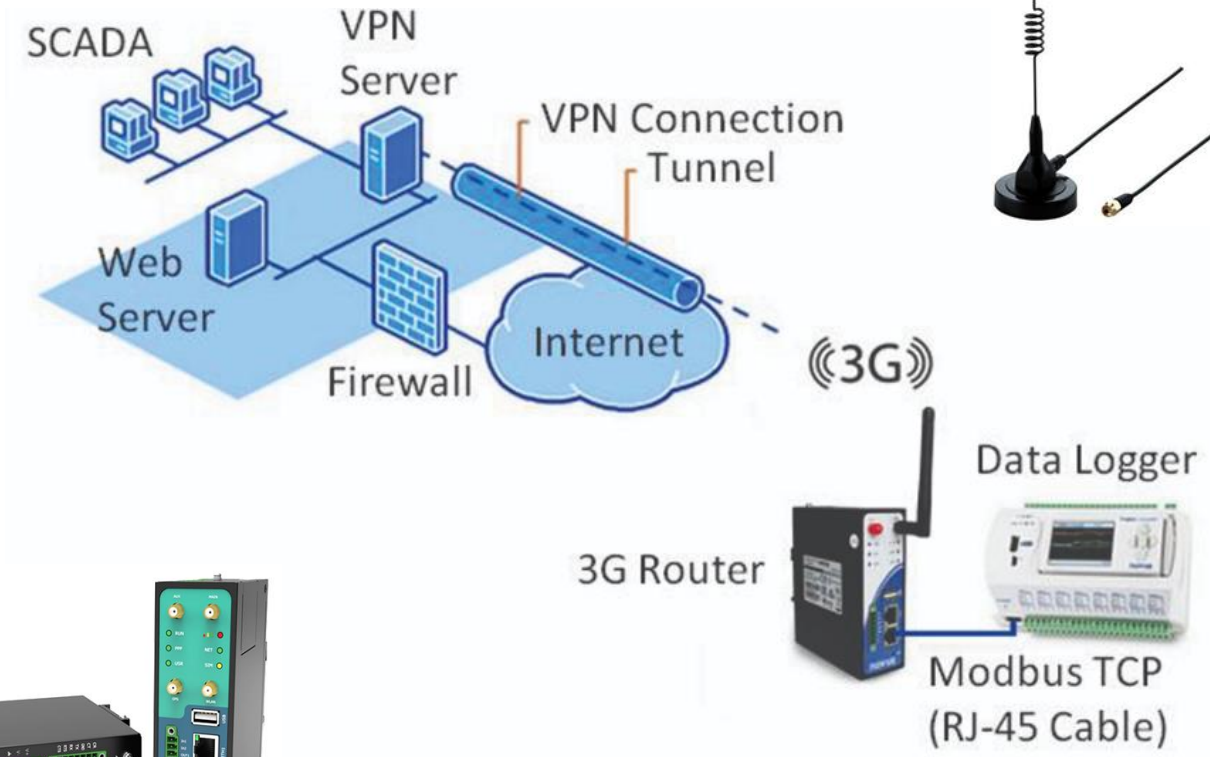
REMOTE MONITORING SYSTEM

CELLULAR ROUTERS

CELLULAR ROUTERS requires 3G/4G coverage and a router.





Advantages Of A Cellular Router:

1. **Does not require installation of base stations**
2. **Does not require antenna alignment**
3. **Easy to install**
4. **Works at any point where there is network coverage**
5. **Budget solution**
6. **Does not require licensing**

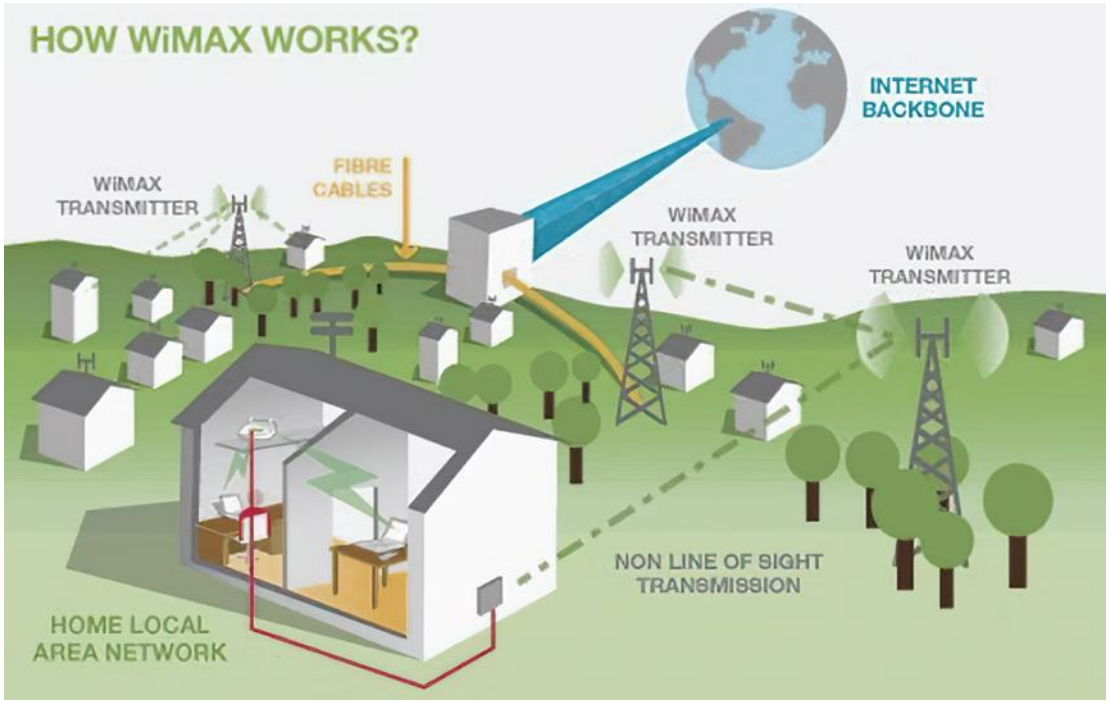
REMOTE MONITORING SYSTEM

WiMAX

WiMAX technology is a wireless broadband communications technology based around the IEE 802.16 standard providing high speed data over a wide area

Advantages Of WiMax:

1. **High connection speed**
2. **High throughput**
3. **Remote configuration**



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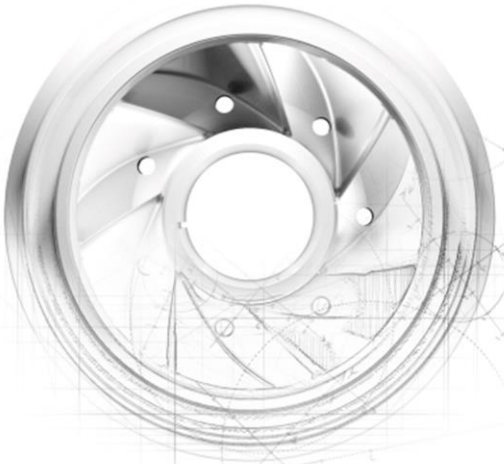

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