

D4 DATA DRIVEN OPERATIONS



www.d4industry.com

SENSE4 IOT TECH



Brief Company Info



D4 is an IOT & Industry 4.0 solution company located in İstanbul Turkey.

D4 is manufacturer of IOT Sensors, Asset / Personnel Tracking Tags, Location Reference Anchors and Gateways to provide Tracking and Condition monitoring solutions in harsh environments.

SENSE4 is D4's brand for IOT sensor family of products.

In addition to SENSE4 products, it offers Industry 4.0 Management and Monitoring Applications for managing, visualizing and integrating collected data for use in operational processes.

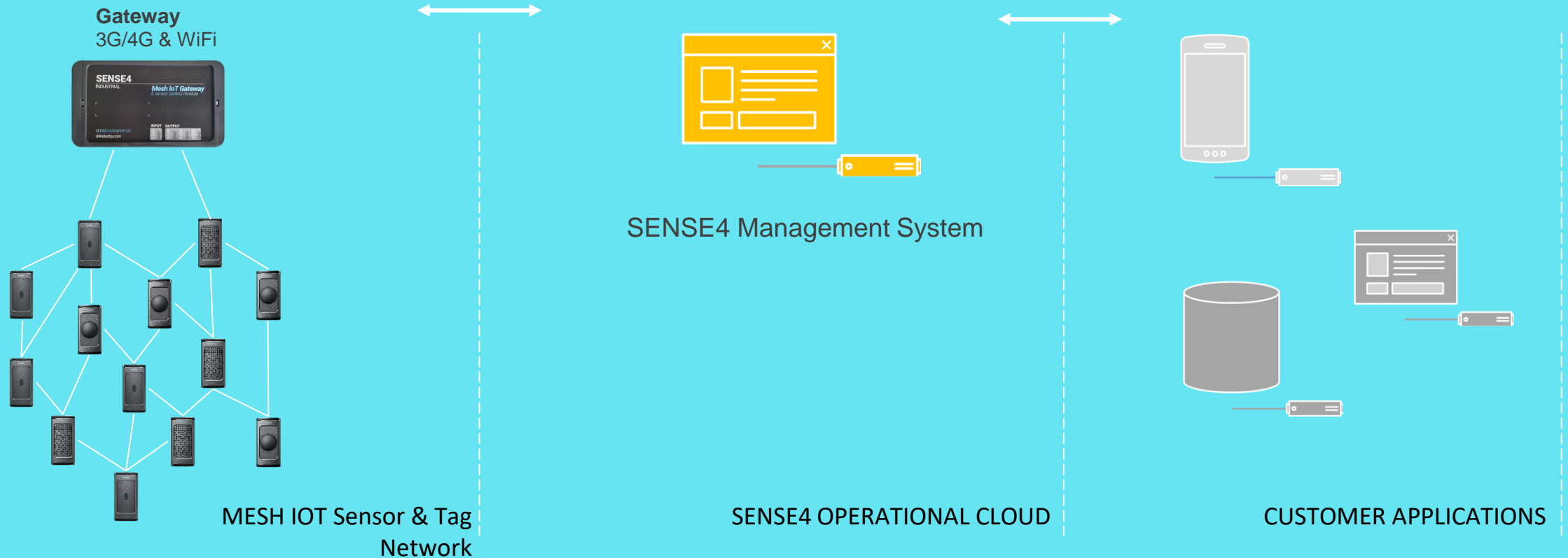
D4 operates +100K online tags in several facilities to track assets and personnel.

SENSE4 TECHNOLOGY

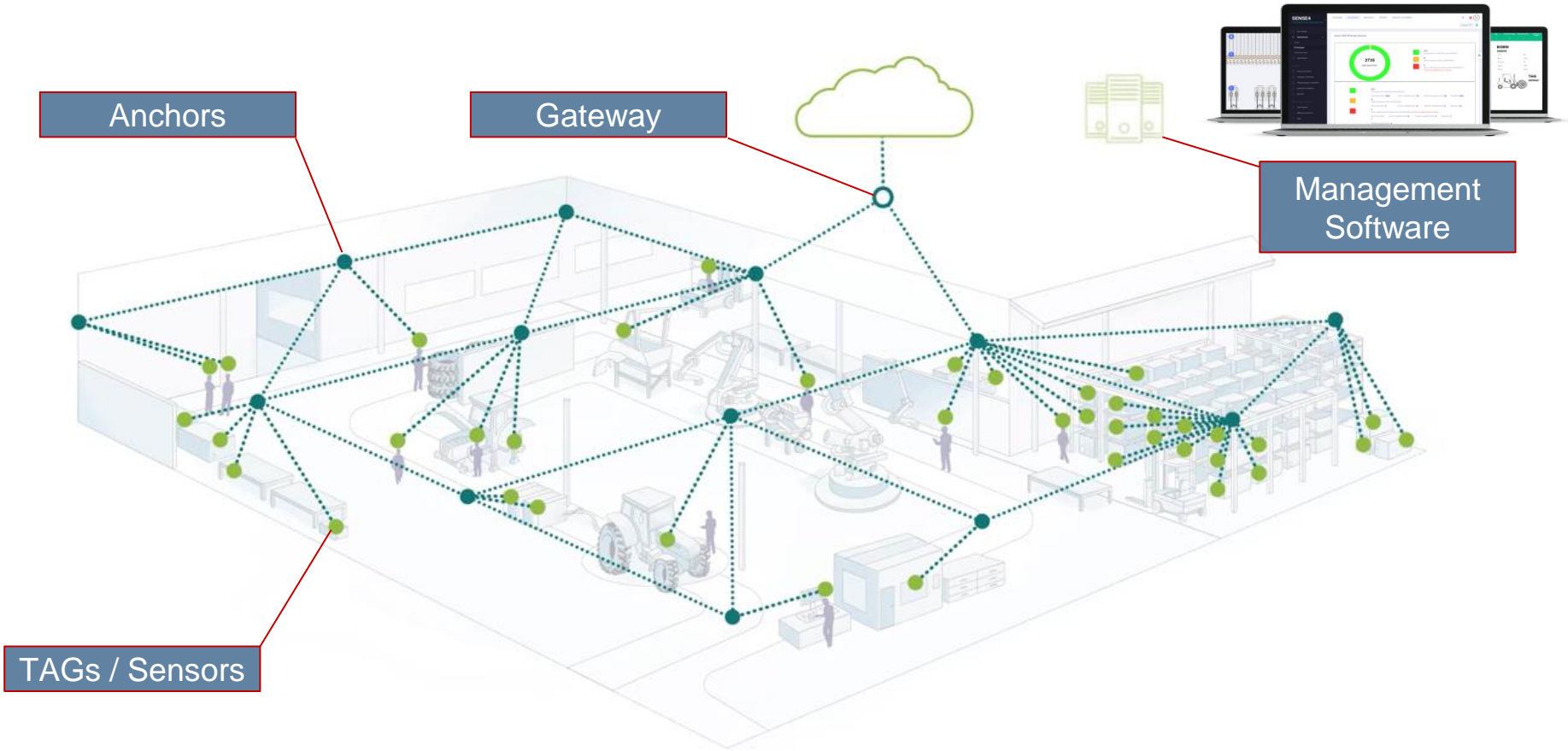


SENSE4 IOT TECH

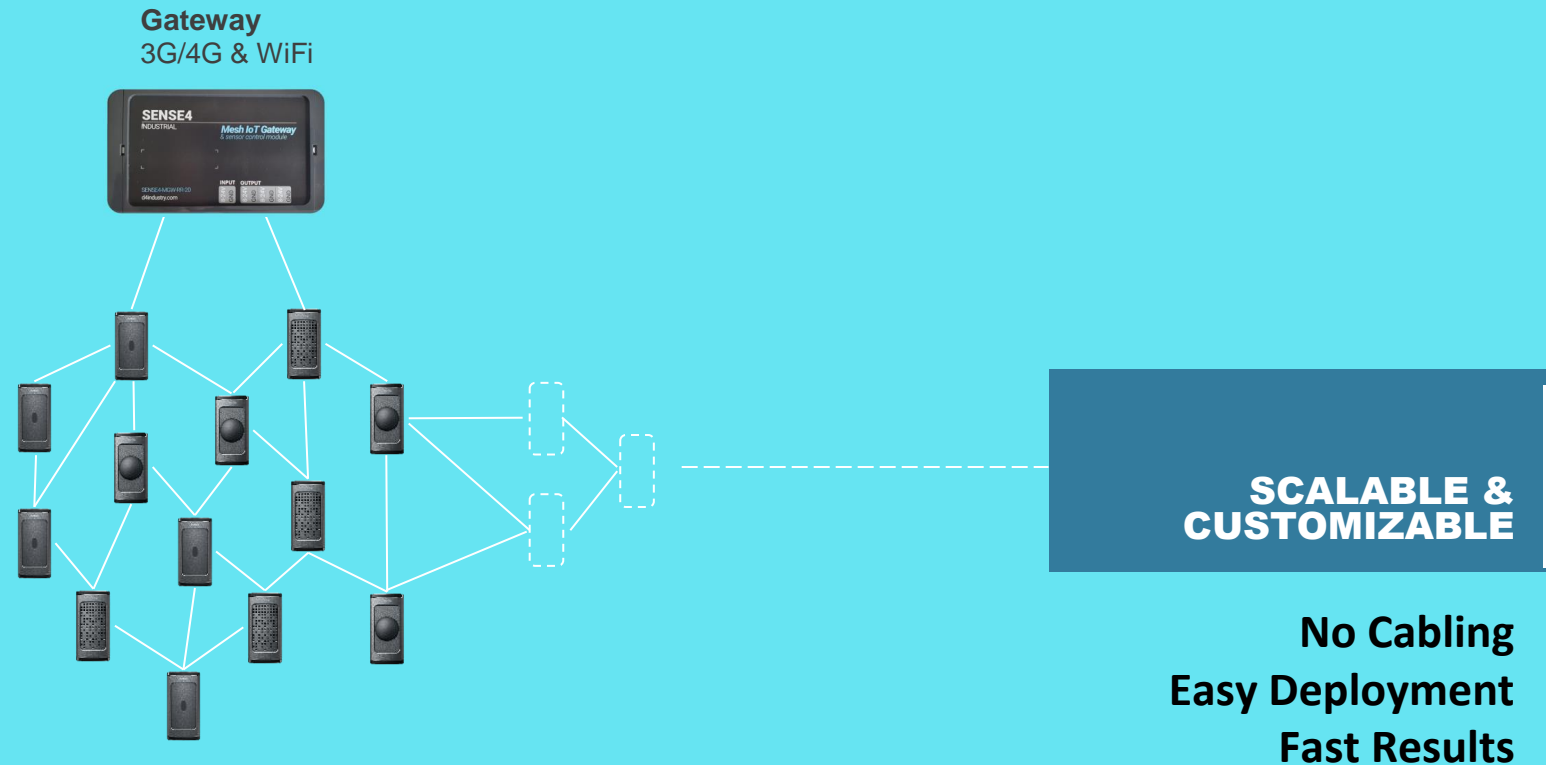
SENSE4 TECHNOLOGY / Architecture



THE POWER OF INTELLIGENT WIRELESS MESH



SENSE4 TECHNOLOGY / MESH IoT



SENSE4 IOT HARDWARE



SENSE4 IOT TECH

MULTI FUNCTION MESH PERSON TAG & SENSOR



Person Tag

Base Functions

Tag & Sensor

Location (2-5 m), Beaconsing, 3-Axis Accelerometer, shock, fall, vibration

Optional : Warning Button, Led, Buzzer

Network

Wireless Mesh

Intelligence

Embedded edge analytics, Configurable behaviour

Protection

IP64 Ready,

Power

CR2477 (1000 mAh), Replaceable

Battery Life

1-3 years depending on beaconsing interval.

Led Indicator

Yes

Operation Mode

Router , Sub node, DA (Directed Advertiser)
NRLS (Non-Router-Long Sleep)

Operating Temperature

-20°C +85°C

Dimensions

46 x 46 x 15 mm

Other

Key-chain hole for hanging

MULTI FUNCTION MESH ASSET TAG & SENSOR



Asset Tag

Base Functions

Tag & Sensor

Location (2-5 m), Beaconing
3-Axis Accelerometer, shock, fall, vibration

Network

Wireless Mesh

Intelligence

Embedded edge analytics, Configurable behaviour

Protection

IP67 Ready (RL5/6 – indoors + outdoors), Suitable for harsh environments

Power

2xAAA Battery, replaceable

Battery Life

1 minute interval : 24 months, 15 minute interval : 8 years

Led Indicator

Optional

Operation Mode

Router , Subnode, DA (Directed Advertiser)
NRLS (Non-Router-Long Sleep), P2L (Pick To Light)

Operating Temperature

-20°C +85°C

Dimensions

39 x 64 x 20 mm

Other

Magnetic Attachment Option for Steel

ANCHORS



Anchor

Functions

Anchor

Router , Subnode, DA (Directed Advertiser) NRLS (Non-Router-Long Sleep)

Network

Wireless Mesh

Intelligence

Embedded edge analytics, Configurable behaviour

Protection

IP40 (RL4 – indoors) to IP67 Ready (RL5/6 – indoors + outdoors)

Power

2xAAA Battery, replaceable or Mains powered

VEHICLE, DRIVER & PERSONNEL DETECTION DRIVER WARNING MODULE ATUM



PICK-TO-LIGHT COLORED INDICATOR P2L-INDICATOR

Base Functions

Vehicle, Driver & Personnel Detection, Driver Warning

3 Colour configurable warning,
Multi tone configurable sound alerts,

Network

Wireless Mesh

Intelligence

Embedded edge analytics, Configurable behaviour

Protection

IP40 (RL4 – indoors)

Power

Car USB power, rechargeable battery.

Battery Life

1 week depending on operation intensity.

Pick to Light operator indicator

3 Colour configurable warning,
Multi tone configurable sound alerts,

Led Indicator

Yes

Operation Mode

Router, Sub node, DA (Directed Advertiser)
NRLS (Non-Router-Long Sleep)

Operating Temperature

-20°C +85°C

Dimensions

100 x 100 x 90 mm



MULTI FUNCTION MESH AMBIENT & HALL SENSOR

Base Functions

Sensor

Temperature Sensor (-40/+100) , Magnetic Sensor, Humidity Sensor.

Network

Wireless Mesh

Protection

IP40 (RL4 – indoors) to IP67 (RL5/6 – indoors + outdoors)

Power

2xAAA Battery, replaceable

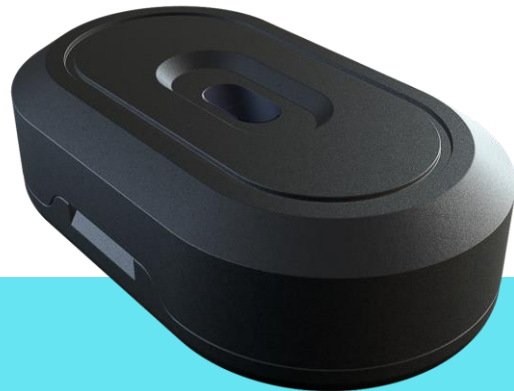
Dimensions

35 x 59 x 16 mm

Battery Life

1 minute interval : 24 months, 15 minute interval : 8 years

MULTI FUNCTION MESH DISTANCE SENSOR



Distance

Base Functions

Sensor

Distance measurement sensor, Acceleration Sensor
Configurable distance and measurement frequency.

Network

Wireless Mesh

Protection

IP40 (RL4 – indoors) to IP67 (RL5/6 – indoors + outdoors)

Power

2xAAA Battery, replaceable

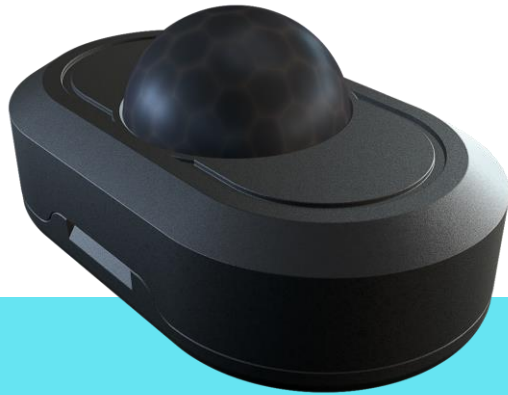
Dimensions

35 x 59 x 16 mm

Battery Life

1 minute interval : 12 months, 15 minute interval : 5 years

MULTI FUNCTION MESH MOTION SENSOR



Motion

Base Functions

Sensor

Motion sensor, Acceleration Sensor
Configurable sensitivity.

Network

Wireless Mesh

Protection

IP40 (RL4 – indoors) to IP67 (RL5/6 – indoors + outdoors)

Power

2xAAA Battery, replaceable

Dimensions

35 x 59 x 16 mm

Battery Life

1 minute interval : 24 months



MULTI FUNCTION MESH CO2 SENSOR

Base Functions

Sensor

CO2, Temperature, Humidity

Network

Wireless Mesh

Protection

IP40 (RL4 – indoors) to IP67 (RL5/6 – indoors + outdoors)

Power

2xAAA Battery, replaceable

Dimensions

43 x 72 x 23 mm

Battery Life

1 minute interval : 24 months, 15 minute interval : 8 years



MULTI FUNCTION MESH SURFACE TEMPERATURE SENSOR

Base Functions

Sensor

K, J, N, R, S, T, E, B Type Thermocouples

Network

Wireless Mesh

Protection

IP40 (RL4 – indoors) to IP67 (RL5/6 – indoors + outdoors)

Power

2xAAA Battery, replaceable

Dimensions

43 x 72 x 23 mm

Battery Life

1 minute interval : 24 months, 15 minute interval : 8 years

MULTI FUNCTION MESH PT100 SENSOR



Base Functions

Sensor

PT 100

Network

Wireless Mesh

Protection

IP40 (RL4 – indoors) to IP67 (RL5/6 – indoors + outdoors)

Power

2xAAA Battery, replaceable

Dimensions

43 x 72 x 23 mm

Battery Life

1 minute interval : 24 months, 15 minute interval : 8 years

MULTI FUNCTION MESH BUTTON & SENSOR



Service Button

Base Functions

Sensor

Configurable 2 Button with configurable indication led lights
Temperature, Humidity

Network

Wireless Mesh

Protection

IP40 (RL4 – indoors)

Power

2xAAA Battery, replaceable

Battery Life

1 minute interval : 24 months, 15 minute interval : 8 years

MESH IoT GATEWAY



SENSE4 Connect

Base Functions

Networking

Wi-Fi, Ethernet WAN Connection, Optional GSM 3G/4G
Wireless Mesh

User Interface

Led indicators

Protection

IP40 (RL4 – indoors)

Power

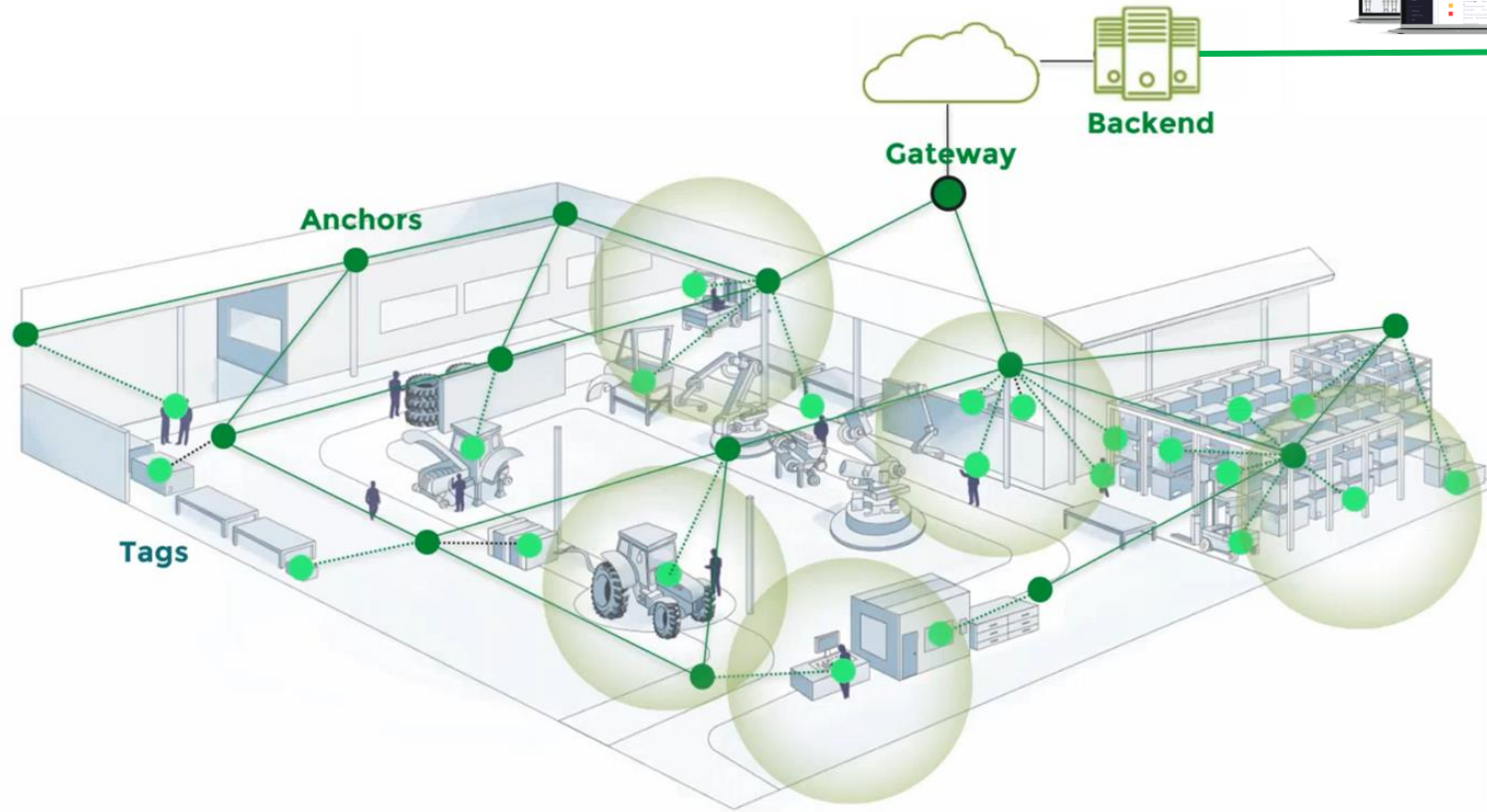
Micro USB power connection

SENSE4 SOFTWARE



SENSE4 IOT TECH

SENSE4 Software Suite



Backend Middleware Server

- Provisioning Server
- Positioning Engine
- Massive Network Monitoring & Management
- Network Configuration
- Device Management(OTAP)
- Alarms
- Analytics
- API Integration

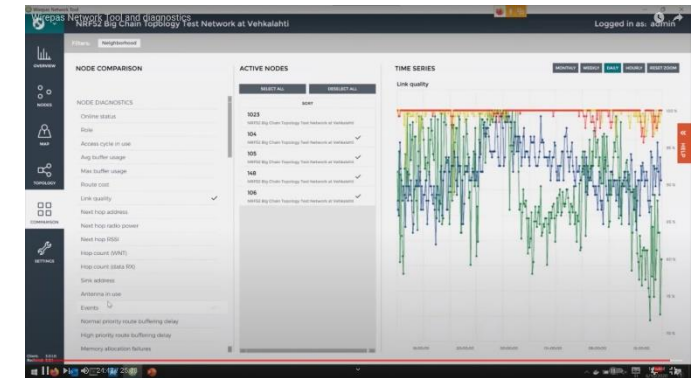
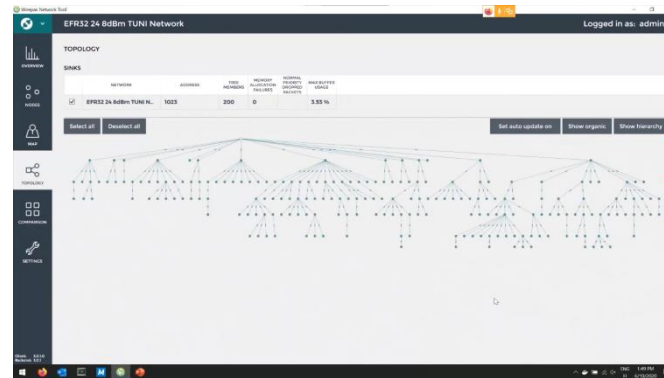
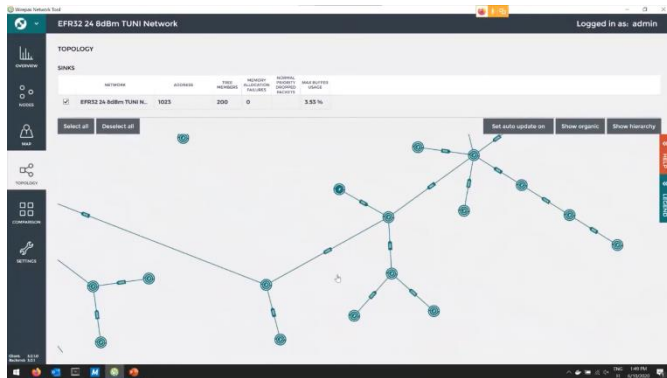
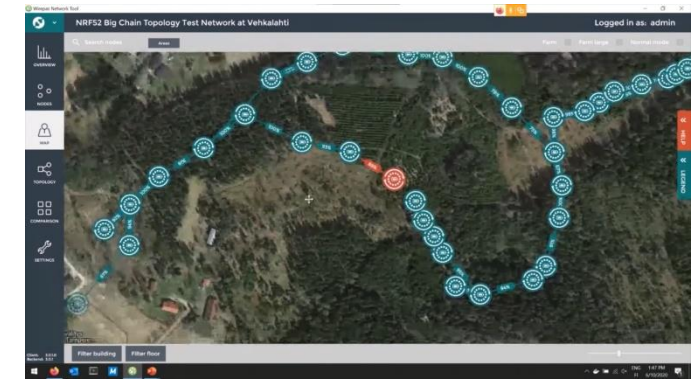
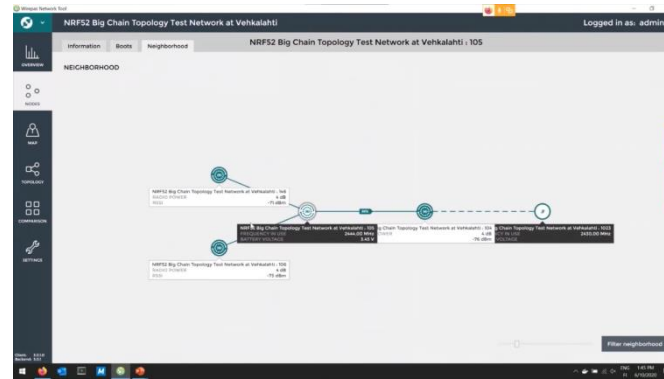
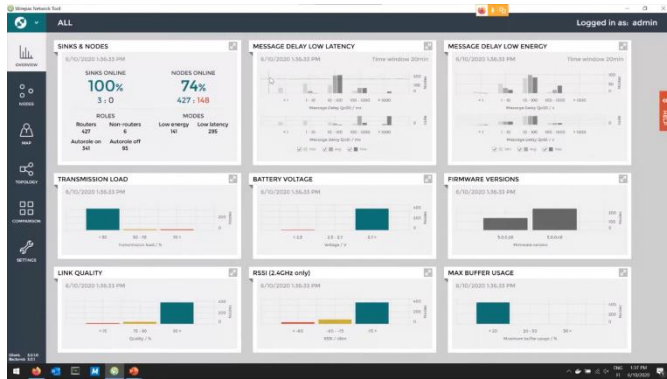
Operation Dashboard

- Site visualization
- Operator Interfaces
- Search Asset / Operator
- Position Asset
- Monitor Alarms
- Reports

Customer Applications

- ERP
- SCM
- WMS

IOT Sensor Mesh Networking & Monitoring Application



Metal Coil Asset Tracking Application

🔴 Movement Alınan Bölge Birakılan Bölge Kat Malzeme

Maizeme Numarası 🔍 📍 Mevcut Konum: -

Sefer Numarası

A2 Kapısı

3 4 5 6 7 8 9 10 11 12

9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

CL

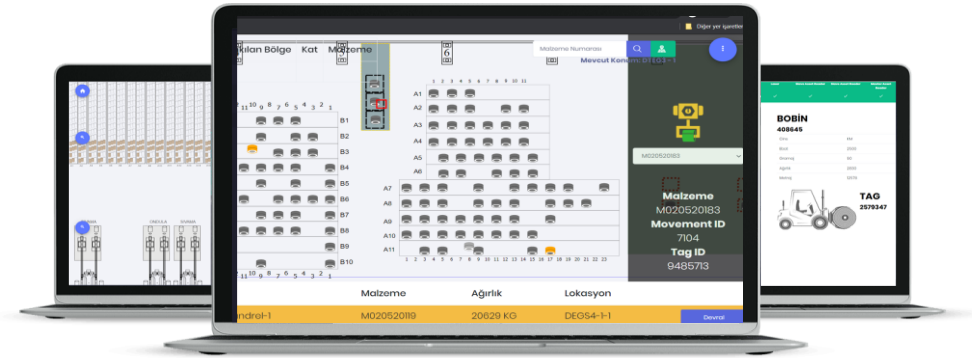
İş Emri Türü Sıra Hat-Hedef Malzeme Ağırlık Plaka Lokasyon

Sevkiyat 1 Sevkiyat-A2 Kapısı - 1 P021450069 5590 KG BC1907ME AD10-II-1 Devral

Metal Coil Asset Tracking Application

The screenshot displays the application interface with a grid of coils. The grid is organized by rows (A1-A11) and columns (1-11). A detailed view of a specific coil is shown below the grid.

İş Emri Türü	Sıra	Hat-Hedef	Malzeme	Ağırlık	Plaka	Lokasyon
Sevkiyat	1	Sevkiyat-A2 Kapısı - 1	P021450069	5590 KG	BC1907ME	AD10-1I-1



- Expertise in Metal Coil Pick & Place Operation Optimization.
- Crane Operator views.
- Logistics operation views.
- Production line views.

The screenshot displays the application interface with a grid of coils. The grid is organized by rows (A1-A11) and columns (1-11). A detailed view of a specific coil is shown below the grid.

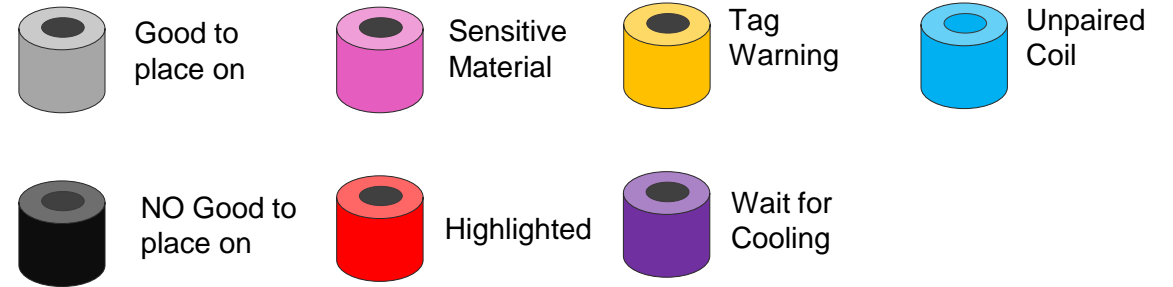
İş Emri Türü	Sıra	Hat-Hedef	Malzeme	Ağırlık	Lokasyon
Hat Besleme	19	ETL-ETL Giriş Mandrel-1	M020520119	20629 KG	DEGS4-1-1

Crane Operator Pick & Place Guidance App

- Digital-Twin view of the stock area.
- Inventory sensitivity based inventory placement guidance.
- Coil Truck Load Check
- Intelligent pick & place notifications and warnings.
- Easy-to-Understand Coloured Views.
- ERP (SAP) integrated crane operator pick & place work orders.



Stacked Sensitivity Colour Guidelines



Compass Connected & Smart IOT Suite



Makine parkınızı izlenebilir kılın. Endüstri 4.0'a adım atın.

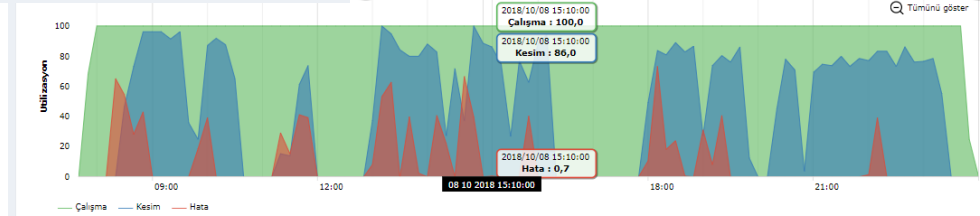
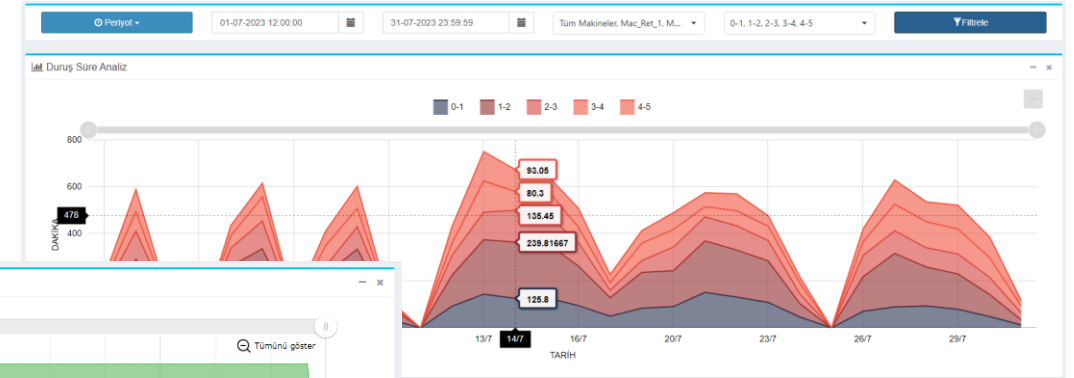
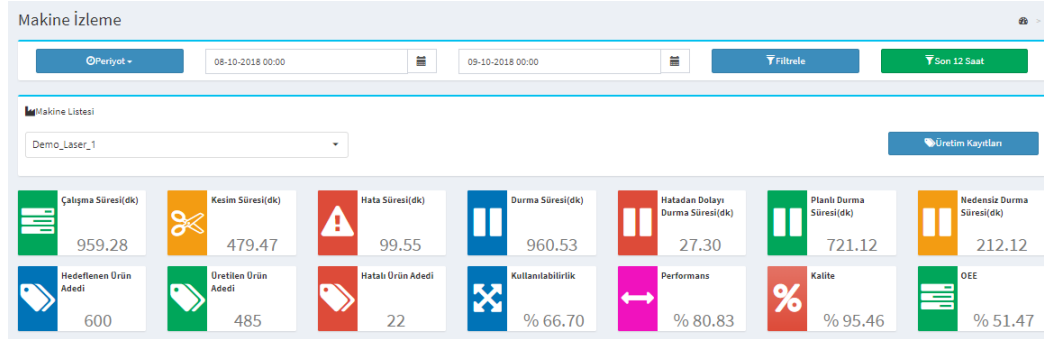
Kolay, hızlı ve etkin

Her türlü makine ve tezgaha uyarlanabilir

Saatler içinde devreye alınabilir

Makine verimliliğini, çalışma süresini, üretim adetlerini 7/24 izleyin

Değişimi takip edin. Kıyaslayın.



D4 WE DELIVER VALUE

THANK YOU

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SENSE4 IOT TECH